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**THE EFFECT OF SOCIAL NORMS ON
IMPULSIVE BUYING**

By

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ABSTRACT

This thesis adds to the generic literature on the role of social norms in broad consumer behaviour by focusing on consumers' impulsiveness, impulsive urge and impulsive buying, and analyses different social norms' effect on the relationship between impulsiveness and impulsive buying.

Using a quantitative approach, three laboratory experiments that employed a shopping scenario with collective normative information test the impact of the collective level of social norms (including prescriptive norms, proscriptive norms, descriptive norms and injunctive norms) on consumers' impulsive buying.

Prescriptive norms and proscriptive norms were shown to influence the relationship between impulsiveness and impulsive buying. However, a significant relationship between impulsiveness and impulsive buying only occurred when consumers were exposed to prescriptive norms. The results also indicated social norms' types had a main effect on impulsive buying and there was an interactive effect between social norms' types and the way they were delivered, in relation to consumers' impulsive urge and buying intentions. Additionally, self-construal had a three-way interactive effect on social norms' types, delivery ways and on impulsive buying.

Overall, this thesis advances theoretical and empirical knowledge on the effects of social norms at the collective level and self-construal on impulse buying, while also proposing practical implications related to marketing communications and strategies.

DEDICATION

This thesis is dedicated to my mum, Hong Tian, for her endless love, continuous support and encouragement that motivated me to be the best I can be.

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CHAPTER 1 INTRODUCTION

1.1 Research background

A significant body of marketing and psychology literature has focused on normative effects on the individuals' rational behaviour and decision making process (Ajzen & Fishbein, 1977; Cialdini, et al., 1990; Kim, et al., 2008). But in recent years some researchers started to investigate the normative influences on consumers' irrational behaviour and buying decisions after Rook and Fisher (1995) firstly indicated that the normative information can also influence consumers' impulsive buying and other rational behaviours (Luo, 2005; Zhang & Shrum, 2008; Bandyopadhyay, 2016). This thesis draws on these arguments on the normative effect on impulsive buying (i.e. the buying behaviour that happens without a rational evaluation and planning) and seeks to enhance the understanding of the role of the collective level of social norms (i.e. the commonly shared beliefs within a social group) and the interactive effect of self-construal (i.e. how people perceive the distance between themselves and other people; it includes dependent and independent self-construal) and normative information on impulsive buying. Given the fact that very little research has been carried out in relation to: a) the collective social norms' effect on impulsive buying, b) how different social norms can influence consumers' impulse buying differently, c) the collective social norms' interactive effect with self-construal on impulse buying, this research aims to specifically examine: i) the effect of collective normative information on the relationship between impulsive urge and impulsive buying, and ii) how self-construal can interact with normative influence on impulsive buying. In doing so, this research will be able to offer explanations on how consumers process their impulsive urge when they are influenced by

social norms, and how consumers with different self-construal would react differently to social influences.

Normative information is considered to have an effect on people's decision making process (Ajzen & Fishbein, 1977; Cialdini, et al., 1990; Montaña & Kasprzyk, 2002; Lapinski & Rimal, 2005). It is a key factor that can influence consumer decision when the normative information is from the people's own evaluations or from important others. Normative influence plays an important role in people's rational behaviour, such as in the Focus Theory of Normative Conduct (Perkins & Berkowitz, 1986; Cialdini, et al., 1990; Lapinski & Rimal, 2005), the Theory of Planned Behavior and Reasoned Action (Ajzen, 1991; Montaña & Kasprzyk, 2002); the Theory of Normative Social Behavior (Rimal & Real, 2005). Additionally, regarding the irrational behaviour, Rook and Fisher (1995) firstly pointed out that normative information can also have an effect on irrational consumption behaviour, such as impulsive buying.

Impulsive buying has been defined as a kind of immediate buying behaviour which occurs without prior buying intention (Kroeber-Riel, 1980; Rook, 1987; Rook & Fisher, 1995), and results from the stimuli in the current buying environments (Madhavaram & Laverie, 2004). These stimuli not only include the situational variables (i.e. store display, promotions) (DeSarbo & Edwards, 1996), but also the individual difference variables (i.e. income, personality) (Piron, 1991; Beatty & Ferrell, 1998). Although some researchers argue that decisions are made logically and rationally, and very little room is left for emotions (Livet, 2010), there are situations in which emotions tend to overrule rational thinking and in these cases then the emotional decision making model which contains both cognitive and emotional aspects should be considered (Sanfey, et al., 2003). Additionally, as pointed by Hausman (2000), one's impulse to buy is hedonically complex (including drivers such as desire for fun, novelty, and surprise) and may lead to emotional conflict as impulse buying

normally has been viewed as irrational or immature (i.e., make a decision emotionally, irresponsible with money...) (Herabadi, et al., 2009) and impulse buying is prone to occur with diminished regards for its consequence (Rook, 1987). Thus, impulsive buying is a special buying behaviour which is not included in the rational behaviour category and cannot be explained by the Theory of Planned Behaviour and Reasoned Action (Ajzen, 1991; Montaña & Kasprzyk, 2002) as this kind of buying behaviour is more related to immediate buying emotions, rather than rational thinking (Karbasivar & Yarahmadi, 2011). In order to understand and explain this particular behaviour, previous impulsive buying researches mainly focused on the development of a clear definition, the impulsiveness measurement scale's development, and the investigation of the potential stimuli that can trigger consumers' impulsive buying.

There is ample research dedicated to the basic definitions and the stimuli that relate to impulsive buying. A large body of literature examined the external triggers (e.g. product on the shelf (DeSarbo & Edwards, 1996) and consumers' cognitive abilities (e.g. personality) (Zhang & Shrum, 2008) that might result in impulsive buying. Beyond this field, just a handful studies have examined the potential factors that might influence these indicators' prediction power on impulsive buying behaviour (e.g. the effect of normative evaluation at the individual level on the relationship between impulsiveness and impulsive buying – Rook & Fisher, 1995; peer presence's effect on impulsive urge and impulsive buying – Luo, 2005). Additionally, a limited number of studies have examined the self-construal's effect on impulsive buying (e.g. self-construal and impulsive buying in alcohol consumption – Zhang & Shrum, 2008; susceptibility to the peers' attitude – Luo, 2005).

Within the consumer psychology literature, studies on self-construal have looked at consumers' involvement in socially approved behaviours, such as helping others (Seo & Scammon, 2014) and pro-environmental behaviour (Arnocky, et al., 2007; Gifford &

Nilsson, 2014), under the Theory of Planned Behaviour and Reasoned Action (Ajzen, 1991; Montaña & Kasprzyk, 2002). Nonetheless, work is still needed in order to investigate how self-construal can influence consumers' irrational behaviour, such as impulsive buying.

Moreover, although some of the research on self-construal explained how it could influence individual normative evaluations' effect on impulsive buying (Luo, 2005; Zhang & Shrum, 2008), additional research about how self-construal can influence the collective level normative information's effect on impulsive buying is required in order to gauge a more complete understanding of this interactive effect. Thus, there is a clear need for research devoted the role of collective level of social norms and self-construal in impulsive buying. This research aims to contribute to both these areas and lay the foundations for further studies.

The timeliness for further research in the area of social norms' effect on impulsive buying is reinforced by the interest shown by marketers and consumers. The research conducted by the team at DisplayMode showed that 71% of Britons did impulsive buying (Gough, 2017). Taking this percentage into account, researchers assumed that the average Briton would spend £416 each year on impulsive buying (Gough, 2017; Hall, 2018), and according to the figures from the Office of National Statistics, adult Britons were associated with an estimated £21.7 billion spend on impulse purchases annually (Gough, 2017). Overall, the statistics show an increasing rate of consumers' impulsive buying.

On the other hand, the latest ethical consumption report from the Ethical Consumer Research Association (2017) showed the value of ethical spending in UK grew by 3.2% to 81.3 billion in 2017. Additionally, some non-profit organisations contribute to the promotion of non-animal testing or using products; for example, the People for the Ethical Treatment of Animals (PETA) discourage the use of animal fur and alligator products (Williams,

2000; Summers, et al., 2006). This could encourage an increasing rate of norms-consistent buying behaviours.

The growing trends of impulsive buying and norm-consistent buying, could signal that some consumers might engage in a norm-consistent impulsive buying, which sometimes can be ethical and have societal benefits. Nonetheless, as there is no clear indication that these behaviours are correlated, further research (as conducted in this thesis) is needed to investigate the effect of collective social norms and self-construal on impulsive buying, particularly in situations that might have ethical and social marketing implications. In doing so, this PhD research will also offer related theoretical implications and practical implications which are discussed below.

1.2 Potential research contributions

There are several potential implications regarding both the theoretical aspect and practical aspect of this research. Such insights would be of particular interest to both researchers and marketers as they would potentially offer explanations on how consumers process their impulsive urge together with the collective normative information (i.e. in the form of prescriptive norms, proscriptive norms, and descriptive norms and injunctive norms respectively). The results could be also used to explain consumers' different reactions to social norms according to consumers' different self-construal; for example, how consumers with different self-construal will accept and be influenced differently by the normative information.

Regarding the theoretical implications, firstly, the present research is likely to contribute to the understanding of the relationship between social norms and impulse buying by redirecting the focus about the normative influence from the rational behaviour to the

irrational behaviour (impulsive buying). Researchers found the majority of Britons (71%) bought impulsively and spent £416 on impulsive buying with a total figure of £21.7 billion at UK level (Gough, 2017; Hall, 2018). However, there is a research gap in understanding what causes this impulse buying and what is the influence of norms on the relationship between consumers' impulsiveness traits and impulsive buying (Perkins & Berkowitz, 1986; Cialdini, et al., 1990; Montaña & Kasprzyk, 2002). Previous studies tried to explain the normative influence on consumers' irrational buying behaviour (Rook & Fisher, 1995; Kacen & Lee, 2002; Luo, 2005; Bandyopadhyay, 2016), but these studies focused on the investigation of the effect of the normative information, that comes from individuals themselves, on impulsive buying. In other words, they only investigated the normative information at the individual level and they did not consider how the normative information at the collective level and how it can influence consumers' impulsive buying. The latter is one of the objectives of this thesis, which is to examine the role of the collective social norms on impulsive buying, and investigate the interactive effect of social norms with self-construal on impulsive buying. So this research will fill in the previous research gap of how collective social norms affect impulse buying, and provide a more comprehensive understanding of how the normative information can influence consumers' impulse buying behaviour. This will potentially contribute to the consumer behaviour literature, especially related to the impulse buying studies. Moreover both companies and policy makers can benefit from this comprehensive understanding regarding the effect of norms in impulsive buying, as they can use the present findings to encourage consumers' impulsive buying in more socially approved contexts such as environmental and social welfare (e.g. help the people in need, protect the environment and animals, etc.) which are consistent with collective social norms.

Secondly, the theoretical implications also include the three proposed theoretical frameworks (see details in Chapter 3) that portray four different types of social norms and their effect on consumers' impulsive buying as well as the interactive effect with self-construal. Because the previous literature only focused on the decision making process of rational psychological processes in impulse behaviour (Ajzen & Fishbein, 1977; Rook & Fisher, 1995), these frameworks will contribute to existing research on understanding impulse buying decision making by examining the influence of different types of social norms (prescriptive norms or proscriptive norms) and an individual's activated self-construal. It foreseen that these frameworks will help understand better consumers' impulsive buying when social norms are involved.

Thirdly, this research will contribute to the psychology literature as it investigates the self-construal's interactive effect with social norms on impulse buying. Previous research in psychology has discussed how self-construal can influence consumers' conflicting goals i.e. between pleasure-seeking and self-regulation (Zhang & Shrum, 2008). Researchers argued that consumers with different self-construal would hold different attitudes towards the normative information they were given (Trafimow, et al., 1991; Ybarra & Trafimow, 1998; Zhang & Shrum, 2008). In other words, dependent construal consumers would have greater motivation to suppress their buying impulsiveness than the consumers who have an independent self-construal, when they perceived their impulsive buying was unapproved in the given normative information (Zhang & Shrum, 2008). However, less research has been dedicated to self-construal's interactive effect with collective social norms on impulsive buying, in particular in relation to how self-construal interacts with different social norms on impulsive buying. Thus, it is anticipated that the present thesis would benefit research both in marketing and psychology by offering an advanced understanding of the role that social norms play in the relationship between impulsiveness trait and impulsive buying, and

a more detailed explanation for the self-construal's interactive effect on impulsive buying. Additionally, findings about how consumers make their impulsive buying decisions when they are influenced by social norms information from the society (i.e. social norms at the collective level) might reveal further insights about the complexity of the decision making process when the decisions are impulsive.

Except these theoretical contributions, this research could also provide practical implications that relate to marketing communications and marketing strategies.

Firstly, the results of the experimental studies are expected to offer some insights into the impact of social norms on consumers' impulsive urge and actual impulsive buying and thus offer evidence for the suitability of including normative influence in adverts aimed at inducing consumers' impulsive buying decisions. If the experimental studies reveal that adverts including proscriptive or prescriptive norms can influence consumers' impulsive buying successfully (as in the case of rational behaviours), marketing communications including normative information can be designed accordingly. This contribution is of particular significance since the normative influence on impulsive buying was only identified (Rook & Fisher, 1995) at the individual level, while the present research focuses on the effect of collective level of social norms on impulsive buying. This effect of the collective level of social norms is likely to happen in the daily life in situations such as the donation innovations connected to restaurant bill payments and the promotions in the shopping malls, and thus would be relevant to practitioners. Moreover, findings in this area will potentially provide guidance to marketers and practitioners regarding their social marketing strategies as the focus of this thesis is on the social norms, which can be used to encourage social or ethical buying, albeit of an impulsive nature.

Secondly, understanding how consumers with different self-construal manage their impulsive urge when they are influenced by social norms could also be useful to marketers. Practitioners could use it as the basis for developing marketing strategies for different target markets, in an attempt to effectively encourage buying which is approved by the society and discourage buying which is disapproved by the society; for example, they could use injunctive norms to encourage independent consumers to engage in more ethical or environmentally-friendly behaviour such as helping others and protecting animals or the environment.

Lastly, from a practical point of view, the results of this research might also have merchandising implications, particularly in terms of product packaging and in-store displays to help marketers to position better their products and express the normative information to consumers more effectively, even to those consumers who are less likely to buy impulsively.

1.3 Overview of the present research

1.3.1 Research objectives and methodological approach

The present research is located within the positivism paradigm and employed a quantitative methodology. Given the limited research about the effect of collective social norms in the context of impulsive buying, a quantitative study employing experiments was designed for this research. Three experiments were conducted using a student sample in the University of Birmingham, between June and September 2017. The participants were recruited through direct invitation and snowball sampling using student networks. All the participants who took a part in the three experiments were randomly assigned to only one experimental group. The experiments aimed to examine how different social norms would influence consumers'

impulsive buying, and how social norms would interact with self-construal on consumers' impulsive buying. Thus, the quantitative experimental design aimed:

RO 1: To investigate whether social norms can influence the relationship between consumers' general impulsiveness and their impulse buying.

RO 2: To understand how different types of social norms can influence consumers' impulse buying differently.

RO 3: To examine how consumers' activated self-construal can further influence the social norms' effect on impulse buying.

1.3.2 Structure of the thesis

There are seven chapters in this thesis: an introduction, a literature review, theoretical framework chapter, a methodology chapter, the findings, the discussion and the conclusion.

The literature review is presented in Chapter 2 and offers insights from the two disciplines that form the basis of the present research – consumer behaviour and psychology. The consumer behaviour literature, mainly focuses on impulsive buying and presents first the development of definitions and the main impulsiveness measurement scales. This is followed by a review of the research focused on the factors that can influence the relationship between impulsiveness and impulsive buying. Alternatively, the psychology literature is focused on the aspects of self-construal, particularly studies related to the impulsive buying. Then, stemming from the review of previous research on normative influence, self-construal

and impulsive buying, Chapter 3 presents the research objectives and the theoretical frameworks for the three studies.

Chapter 4 discusses the methodological approach of this research. First, the methodology for the quantitative experimental studies is discussed in terms of the reasons for choosing laboratory experiments. Then the chapter includes the experimental design for the present research, the development of the experimental scenarios, the selection of representative social norms, the sample size and sample power, the selected scales for impulsiveness measurement, pre-testing and experiment procedures, and data analysis methods.

Chapter 5 presents the results of the three laboratory experimental studies which tested the social norms' effect on the relationship between impulsiveness and impulsive buying, the different social norms' effect on impulsive buying, and self-construal's interactive effect with social norms on impulsive buying, respectively.

Chapter 6 summarise and discusses the results of the three experimental studies and makes a comparison with previous research findings in detail. Subsequently, the theoretical and practical contributions of the present research are introduced, followed by an examination of limitations and recommendations for the future research.

The final part of the thesis, Chapter 7, summarises the rationale for this research and the findings of the three experimental studies, the research contributions and avenues for future research.

CHAPTER 2 LITERATURE REVIEW

2.1 Introduction

In today's business environment, companies cannot just focus on their economic performance – they also have to consider society's long-term interests (Kotler, 1972). From a marketing point of view, using social norms in their marketing campaigns can enable them to address the benefits of social good for securing and maintaining customer engagement. Therefore, social norms have been widely used by many companies and many public sector bodies (e.g. the World Health Organization, PETA¹, the US Agency for International Development, etc.) in different types of marketing activities.

Social norms play an important role in many companies' marketing campaigns, related to energy conservation, environmental regulation, recycling, animal welfare, health etc. For example, Body Shop uses 'anti-animal testing' social norms in their marketing activities to keep their current customers and attract potential customers.

Social norms have the power to influence human behaviour (Sumner, 1906; Sherif, 1936; Pepitone, 1976; Shaffer, 1983; Cialdini, et al., 1990; Cialdini, et al., 1991). Based on their primarily *social* character, social norms have been viewed as joint agreements in a group which have been understood by the group members, and such agreements can be used to guide or constrain group members' daily social behaviour (Cialdini & Trost, 1998). Social norms have always been linked to rational behaviours. In the literature, there are a limited

¹ PETA: People for the Ethical Treatment of Animals.

number of studies investigating the effect of social norms on consumers' irrational purchase behaviour, such as impulse buying.

Impulse buying behaviour has been identified as a kind of immediate buying behaviour that occurs without prior buying intention, but results from stimuli in the current buying environments (Wolman, 1973; Kroeber-Riel, 1980; Rook, 1987; Piron, 1991; Rook & Fisher, 1995; DeSarbo & Edwards, 1996; Beatty & Ferrell, 1998; Madhavaram & Laverie, 2004). Previous studies about impulse buying behaviour have only focused on consumers' characteristics and the external environment in which customers make impulse purchases (Hoch & Loewenstein, 1991; Kacen & Lee, 2002); normative influence linked with rational behaviour was not considered as an influence factor on impulsive buying. However, as suggested by Rook and Fisher (1995), consumers' normative evaluation has been proved to influence impulse buying behaviour, and the presence of others (Luo, 2005), susceptibility (Luo, 2005) and self-construal (Zhang & Shrum, 2008) has also been identified as influencing impulsive buying.

This chapter reviews the literature related to impulse buying, social influence and self-construal. The review gives insights into the extant knowledge, identifies the gaps in the literature and discusses further research opportunities. The review offers a firm theoretical base for this research.

This chapter starts with an overview of the existing research related to impulsive buying (Section 2.2.1), followed by a development of the definition of impulse buying (Section 2.2.2) and research (Section 2.2.3). Section 2.2.4 reviews the existing measurement scales which can be used to screen consumers' general impulsiveness. Section 2.2.5 discusses the influencing factors' moderating effects on the relationship between consumers' general impulsiveness traits and impulse buying.

After reviewing the impulse buying literature, the chapter moves on to a review of how social norms are formatted and transmitted in a social group (section 2.3.2), and the classification of social norms dependent on norms' different characteristics (section 2.4). The literature related to self-construal is then reviewed in Section 2.5. The chapter concludes with a summary (Section 2.6).

2.2 Impulse buying behaviour

2.2.1 Overview of impulse buying research

Research interest in consumer impulse buying behaviour started in the 1950s. Clover (1950) first identified the importance of the impulse purchase in the retailing industry. Later, many researchers conducted different exploratory studies to investigate different aspects of impulse buying, in pursuit of a precise explanation of this special type of buying behaviour. In general, there are two lines of research focusing on impulse buying. The first line of research focuses on investigating the definitions and the external stimuli that can trigger or influence impulse buying behaviour and generalizing the characteristics of impulse buyers, i.e. cognitive traits (Piron, 1991), personality (Herabadi, et al., 2009; Bratko, et al., 2013). The second line of research focuses on the development of the impulse buying conceptual model which can help to predict consumers' impulse buying occurrence possibility, specially the moderators that can influence consumers' impulse buying, i.e. the precursor modelling of impulsive buying (Beatty & Ferrell, 1998), shopping enjoyment tendency (Flight, et al., 2012; Mohan, et al., 2013). The two lines of research about impulse buying are discussed systematically.

2.2.2 Impulse buying – definitions

In the first study of impulse buying by Clover (1950), impulse buying was identified as an important type of consumer purchase that can influence the retail stores' profit. In the Consumer Buying Habits studies conducted by DuPont² from 1948 to 1965, impulse buying was simply defined as unplanned purchases. Other researchers pointed out that consumers' impulse buying can be triggered and influenced by some external situational stimuli such as in-store promotions, locations, sales person, and the product itself, etc. (Appelum, 1951; Stern, 1962; Wolman, 1973; Kroeber-Riel, 1980; Rook & Hoch, 1985; Rook, 1987; Piron, 1991; Rook & Fisher, 1995; Beatty & Ferrell, 1998; Madhavaram & Laverie, 2004); what is more, some personal factors such as the shopping enjoyment, personality, impulse buying traits, etc. can also trigger or influence consumers' impulse buying behaviour (Stern, 1962; Rook & Fisher, 1995; Beatty & Ferrell, 1998; Verplanken & Herabadi, 2001). In general, consumers' impulse buying has been defined as a kind of immediate buying behaviour which occurs without prior buying intention, but results from the interactions of external stimuli and personal factors (Wolman, 1973; Kroeber-Riel, 1980; Rook, 1987; Piron, 1991; Rook & Fisher, 1995; DeSarbo & Edwards, 1996; Beatty & Ferrell, 1998; Verplanken & Herabadi, 2001; Madhavaram & Laverie, 2004; Sun & Wu, 2011; Xiang, et al., 2016; Vonkeman, et al., 2017)). A summary of the development of the definitions of impulse buying is shown in Table 2.1.

² DuPont is short for E. I. DuPont de Nemours and Company.

Table 2.1 A Summary of the definitions of impulse buying

| Researcher(s) | Year | Definitions |
|--|-----------|--|
| Clover | 1950 | Impulse purchase is important to retail stores. |
| DuPont – Consumer Buying Habits Studies | 1948-1965 | The DuPont studies provided the paradigm for most early research and defined impulse buying as an ‘ <i>unplanned</i> ’ purchase. |
| Applebaum | 1951 | Defined impulse buying as “ <i>buying that presumably was not planned by the customer before entering a store, but which results from a stimulus created by a sales promotion device in the store.</i> ” (p. 176) |
| Stern | 1962 | <p>“<i>Impulse buying is influenced by a variety of economic, personality, time, location, and even cultural factors. These vary not only among different shoppers considering purchase of the same item, but also for the same shopper buying the same item but under different buying situations.</i>” (p. 59)</p> <p>Identified four distinct types of impulse purchasing: planned impulse buying, pure impulse buying, reminder impulse buying, and suggestion impulse buying.</p> |
| Wolman | 1973 | An impulse is not consciously planned, but arises immediately upon confrontation with a certain stimulus. |
| Kroeber-Riel | 1980 | Impulse buying is a reactive behaviour and often involves an immediate action response to a stimulus. |
| Rook & Hoch | 1985 | Rook and Hoch stated the growing consensus among researchers and they suggest that defining impulse purchasing as ‘ <i>unplanned</i> ’ is neither a sufficient condition nor a necessary condition for construal as an impulse purchase. |
| Rook | 1987 | <p>Impulse purchasing is not confined to any particular product or product category.</p> <p>“<i>Impulse buying occurs when a consumer experiences a sudden, often powerful and persistent urge to buy something immediately. The impulse to buy is</i></p> |

| | | |
|----------------------------------|------|---|
| | | <i>hedonically complex and may stimulate emotional conflict. Also, impulse buying is prone to occur with diminished regard for its consequences.” (p. 191)</i> |
| Piron | 1991 | Piron stated that Rook’s (1987) definition is too narrow since it implies that emotional and cognitive reactions must accompany the purchase, because whether the customer experiences emotional and cognitive reactions may depend on the economic, personal, and cultural factors and characteristics and prices of the products. |
| Rook & Fisher | 1995 | Defined impulse buying “ <i>as a consumer’s tendency to buy spontaneously, unreflectively and immediately.</i> ”(p. 306) |
| Verplanken & Herabadi | 2001 | “ <i>To buy spontaneously, unreflectively, immediately, and kinetically.</i> ” (p. 73) |
| Sun & Wu | 2011 | “ <i>To buy spontaneously, unreflectively, immediately, and kinetically.</i> ” (p. 342) |
| DeSarbo & Edwards | 1996 | <p>“<i>Impulse buying occurs when an external trigger (e.g. the product on the shelf) stimulates the individual to make a purchase.</i>” (p. 233)</p> <p>“<i>Impulse buying is characterized as tendency to buy spontaneously or reflexively in response to the physical product stimulus.</i>” (p. 233)</p> |
| Beatty and Ferrell | 1998 | “ <i>Impulse buying is a sudden and immediate purchase with no pre-shopping intentions either to buy the specific product category or to fulfill a specific buying task. The behaviour occurs after experiencing an urge to buy and it tends to be spontaneous and without a lot of reflection (i.e. it is “impulsive”). It does not include the purchase of a simple reminder item, which is an item that is simply out-of-stock at home.</i> ” (p. 170) |
| Madhavaram & Laverie | 2004 | “ <i>Impulse buying is a result of a purchaser’s immediate reaction to external stimuli that is often hedonically charged. An impulse buying episode signifies a change in purchaser’s intention to purchase that particular product before and after the exposure to stimuli. The stimuli are not limited to just the product and change in purchaser’s intention does not include a reminder item that is simply out of stock at home.</i> ” (p. 60) |

| | | |
|-------------------------|------|---|
| Xiang, et al. | 2016 | <i>“Impulse buying is defined on the basis of its abundant definitions as ‘a purchase that is unplanned, the result of an exposure to a stimulus, and decided on the spot’ (Piron, 1991; p. 512).”(p.334)</i> |
| Vonkeman, et al. | 2017 | <i>“Impulsive purchases are made on the spot, that is, within the shopping environment, And therefore highly driven by stimuli encountered within that shopping environment.”(p. 1039)</i> |

The research objective of the present study is to investigate the effect of social norms on impulse buying, and this follows the most commonly used impulse buying definition (cited by 1589) which was defined by Rook and Fisher (1995) in their research on the normative influence on impulsive buying. Specifically, this definition presents impulse buying as “*a consumer’s tendency to buy spontaneously, unreflectively and immediately*” (Rook & Fisher, 1995; p. 306).

Except this definition of impulse buying, there are two other related definitions which are used in the current research – buying impulsiveness trait (study one) and buying impulsive urge (study 2 and 3). Buying impulsiveness trait was defined as a basic human trait, which can encourage people to buy impulsively (Rook & Fisher, 1995; Muruganantham & Bhakat, 2013; Amos, et al., 2014). Rook and Fisher (1995) also pointed out that the buying impulsiveness trait was an aspect of general impulsiveness trait, which can lead consumers to behave as “impulse buyers”. Alternatively, impulsive urge is the immediate buying impulsiveness under a particular buying situation (Luo, 2005; Schreiber, et al., 2011; Badgaiyan & Verma, 2015; Aragoncillo & Orus, 2018). This follows prior research, which sees buying impulsiveness as a personality trait that can predict consumers’ willingness to engage in impulse buying, and impulsive urge as the immediate buying impulsiveness in the current buying situation in the current research.

2.2.3 Impulse buying research – historical development

Impulse buying has drawn many researchers' attention since the 1950s. In the earlier studies about impulse buying, researchers treated impulse buying strictly as unplanned buying, and researchers viewed the pervasiveness of impulse purchase solely; consumers were never investigated (Clover, 1950; DuPont, 1945, 1949, 1954, 1959, 1965). These studies tended to provide managerial benefits only (e.g. in the retail store's interest) (Clover, 1950; Applebaum, 1951; DuPont, 1945, 1949, 1954, 1959, 1965). Clover (1950) conducted a study with 154 retail stores in three towns in Texas over a five-week period. After interviewing 154 store managers, Clover (1950) found that impulse buying accounted for an average of 21.8% of the total sales in the three towns, and the fluctuation of all the stores' sales during the five-week (closed one day in 2nd and 4th week) period indicated that impulse buying was very important for retail stores.

Applebaum (1951) suggested that consumers' impulse buying might be triggered by a stimulus in the store when consumers came to shop. It was the first impulse buying study involving consumers. Applebaum (1951) investigated the customers' buying patterns by using several marketing research techniques including analysing the stores' sales records which contained product type, price, purchase time, etc., observing consumers' characteristics such as gender, colour and age group, and interviewing consumers to acquire information about their origins, visiting frequencies, etc. In the study, Applebaum (1951) conducted a survey about consumers' responses to in-store sales promotion tactics (e.g. displays, pricing, demonstrations and sales talks) and defined impulse buying as a "*buying behaviour which presumably was not planned by the customer before entering a store, but which results from a stimulus created by a sales promotion device in the store.*" (p. 176). Compared to the previous definitions of impulse buying, this definition marks a significant

improvement as it considered the stimuli that might trigger impulse buying in store. However, it still has some limitations because the stimuli it discussed were restricted to the promotional devices in stores.

Researchers have been encouraged to carry out in-depth investigations into impulse buying as previous studies about consumer purchase behaviour showed that an increasing proportion of consumer purchases have been made on an impulse basis (Table 2.2). In the classification of impulse buying behaviour, Stern (1962) stated that previous impulse buying definitions only considered consumers' buying behaviour which was not planned in advance when they entered the stores, and then regarded impulse buying equally as '*unplanned buying*'; this did not sufficiently capture the nature of impulse buying. Based on different exposures to an external stimulus, Stern (1962) classified four main types of impulse buying: (1) pure impulse buying, i.e. "the *novelty or escape purchase which breaks a normal buying pattern*" (p. 59); (2) reminder impulse buying, which happens when consumers see something in store that reminds them the stock is low at home or recalls previous information about the items which they have not decided to buy before; (3) suggestion impulse buying, which occurs when consumers have no previous knowledge and when it is the first time they have seen the product and they perceive a need for it; (4) planned impulse buying, which occurs when the consumers have some specific buying intentions in mind which depend on the special price, coupon, etc. Stern's (1962) classification was a substantial advance in the understanding of impulse buying, and even after several decades, many researchers still used Stern's classification as a starting point when they conducted the research related to impulse buying.

Table 2.2 Consumers' unplanned purchase per cent in total purchase

| Type of purchase | 1945 | 1949 | 1954 | 1959 |
|-----------------------------|-------------|-------------|-------------|-------------|
| Specifically planned | 48.2% | 33.4% | 29.2% | 30.5% |
| Generally planned | 11.0% | 26.7% | 21.0% | 15.9% |
| Substituted | 2.6% | 1.5% | 1.8% | 2.7% |
| Unplanned | 38.2% | 38.4% | 48.0% | 50.9% |
| | 100% | 100% | 100% | 100% |

(Source: Consumer Buying Habits Studies for 1945, 1949, 1954, 1959, DuPont Studies)

Moreover, over time, it was agreed that impulse buying is not specific to any particular product types or categories (DuPont, 1945, 1949, 1954, 1959, 1965; Clover, 1950; West, 1951; POPAI, 1963; Kollat & Willett, 1967; Williams & Dardis, 1972; Prasad, 1975; Bellenger, et al., 1978; Rook, 1987). A summary of the percentages of impulse buying within different product types and outlets can be found in Table 2.3.

Table 2.3 A summary of findings concerning the occurrence of impulse purchasing by types of product and types of outlet

| Investigator(s) | Year | Types of product | Rate of unplanned purchasing per product | Types of outlet | Rate of unplanned purchasing per outlet |
|-----------------|------|-----------------------------|--|------------------------|---|
| DuPont | 1945 | Grocery product categories | N/A | Grocery | 38.2% |
| | 1949 | | | | 38.4% |
| | 1954 | | | | 48% |
| | 1959 | | | | 50.9% |
| | 1965 | | | | 50.0% |
| Clover | 1950 | N/A | N/A | 19 store types: | |
| | | | | Variety | 60.5% |
| | | | | Grocery | 26.0% |
| | | | | Service station | 14.8% |
| | | | | Book | 14.7% |
| | | | | Department furniture | 14.5% |
| West | 1951 | 14 product categories: | | | |
| | | Candy | 65.8% | Grocery | 43.5% |
| | | Bakery goods | 70.1% | Drug | 26.6% |
| | | Cosmetics | 41.8% | Varity | 41.5% |
| | | Jewellery | 49.5% | Department | 33.6% |
| | | Wearing apparel | 24.1% | | |
| | | | | | |
| POPAI | 1963 | Over 50 product categories: | | 3 types of drug store: | |
| | | | 0.0% | Clerk- assisting | |
| | | Prescriptions | 10.0% | Self- service | 11.0% |

| | | | | | |
|-----------------------------|------|-------------------------------|-------|-------------------|-------|
| | | Camera supplies | 23.0% | Super drug | 22.0% |
| | | Cosmetics | 48.0% | | 30.0% |
| | | Candy | | | |
| Kollat & Willett | 1967 | 64 grocery product categories | N/A | Grocery | 50.5% |
| Willams & Dardis | 1972 | Women's outerwear | 46.0% | Specialty | 33.0% |
| | | Women's underwear | 30.0% | Department | 37.0% |
| | | Men's wear | 32.0% | Discount/ variety | 31.0% |
| | | Household textiles | 24.0% | | |
| Prasad | 1975 | Non- food, such as: | N/A | Department | 39.3% |
| | | Women's wear | | Discount | 62.4% |
| | | Men's wear | | | |
| | | Housewares | | | |
| | | Stationery/ cards | | | |
| Bellenger, et al. | 1978 | 20 product categories: | | Department | 38.7% |
| | | Women's lingerie | 27.0% | | |
| | | Cosmetics | 33.0% | | |
| | | Men's apparel and furnishings | 40.0% | | |
| | | Bakery goods | 55.0% | | |
| | | Costume jewellery | 62.0% | | |

(Source: Cobb and Hoyer, 1986)

Table 2.3 shows that impulse buying behaviour can happen with any product type and under any category. Apart from the definitions which have been developed from the studies that mainly focused on the products and stores, there are also definitions of impulse buying that were developed from the studies focusing on consumers' experience of hedonically complex (Weinburg & Gottald, 1982; Cobb & Hoyer, 1986; Rook, 1987; Piron, 1991).

For example, Rook (1987) extended the studies of impulse buying by focusing the research on consumer characteristics. Rook (1987) thought that previous taxonomical studies were imprecise due to the fact that almost any product could be bought on impulse (Stern, 1962; Kollat & Willett, 1969), and there was not any useful theoretical framework of impulse buying to guide the research. Additionally, defining impulse buying as unplanned purchasing was too vague. Many researchers found that not all unplanned purchases were made on impulse (Stern, 1962; Pollay, 1968; Kollat & Willett, 1969).

Based on previous studies of impulse buying (Engel, et al., 1968; Howard & Sheth, 1969; Howard, 1977; Kroeber-Riel, 1980; Weinburg & Gottald, 1982; Rook & Hoch, 1985), Rook (1987) found that the concept of impulse buying was much narrower and more specific than unplanned purchasing and he also found the consumers who bought impulsively often felt there was something calling them to buy and their purchase was forceful and urgent. Therefore, Rook (1987) defined impulse buying as a buying behaviour which *“occurs when a consumer experiences a sudden, often powerful and persistent urge to buy something immediately. The impulse to buy is hedonically complex and may stimulate emotional conflict. Also, impulse buying is prone to occur with diminished regard for its consequences”* (p. 191). Compared with a rational purchase, an impulse purchase is a fast one without prior buying intention and evaluation. This understanding is very similar to the “pure impulse buying” identified by Stern (1962).

Although Rook's (1987) definition gained more acceptance than previous ones, it still has some limitations. Piron (1991) argued that this definition was still too narrow because it only considered the impulse buying that goes along with hedonically complex; but whether consumers turn cognitive reactions into real purchases might depend on their personality, environmental factors and characteristics of the products, etc. Based on Piron (1991), Beatty and Ferrell (1998) defined impulse buying as *"a sudden and immediate purchase with no pre-shopping intentions either to buy the specific product category or to fulfill a specific buying task. The behaviour occurs after experiencing an urge to buy and it tends to be spontaneous and without a lot of reflection"* (p. 170).

Although Beatty and Ferrell's (1998) definition addressed the limitations of Rook's (1987), the definition did not consider the stimuli that might trigger impulse buying. These stimuli included *"low price, marginal need for item, mass distribution, self-service, mass advertising, prominent store display, short product life and small size or light weight"* (Stern, 1962; pp. 61-62), and as well as shelf space (Cox, 1964; Patterson, 1963), the market's environment (Kotler, 1974), the locations of the retail shelf (Rook, 1987), and the product itself (Weun, et al., 1998), etc.

On the basis of Rook's (1987) definition, and as well as considering the stimuli that might cause impulse buying, Madhavaram and Laverie (2004) defined impulse buying as *"a result of a purchaser's immediate reaction to external stimuli that is often hedonically charged. An impulse buying episode signifies a change in purchaser's intention to purchase that particular product before and after the exposure to stimuli. The stimuli are not limited to just the product and change in purchaser's intention does not include a reminder item that is simply out of stock at home"* (p. 60).

After nearly fifty years developed, this specific buying behaviour – impulse buying

behaviour has been identified as a kind of immediate buying behaviour which occurs without prior buying intention, but results from the stimuli in the current buying environments; and the stimuli not only include the situational variables, but also include the individual difference variables (Wolman, 1973; Kroeber-Riel, 1980; Rook, 1987; Piron, 1991; Rook & Fisher, 1995; DeSarbo & Edwards, 1996; Beatty & Ferrell, 1998; Madhavaram & Laverie, 2004).

An increasing rate of impulse buying has been identified among consumers' buying activities (DuPont, 1945, 1949, 1954, 1959, 1965) and this special buying behaviour with no prior buying intention may result in some negative consequences (O'Guinn & Faber, 1989a), such as lack of money, credit card repayment and regret, etc. After researchers developed a more accurate definition for impulse buying, they moved the research concern to how to identify a consumer as an impulse buyer (see Section 4.3.9 for details) and the factors that can moderate the relationship between consumers' impulsiveness and impulse buying.

Although in Rook and Fisher (1995) consumers who ranked higher in buying impulsiveness are more likely to engage in impulse buying, researchers also found this relationship might be affected by many other factors and some these factors' effects on that relationship were already confirmed (Hoch & Loewenstein, 1991; Rook & Fisher, 1995). In order to get a better understanding of consumers' impulse buying decision making processes, some researchers continued their studies on impulse buying by investigating the factors which might affect consumers' impulsiveness traits on their final buying behaviours (Hoch & Loewenstein, 1991; Rook & Fisher, 1995; Kacen & Lee, 2002; Luo, 2005; Zhang & Shrum, 2008; Flight, et al., 2012; Foroughi, et al., 2013).

2.2.4 Moderators between general impulsiveness and impulse buying behaviour

While more and better impulse buying studies were conducted over the past few decades, researchers' efforts focused on both the predictive power of buying impulsiveness, and the factors that might influence that power, such as consumers' economic attributes, the time they spent on shopping (Hoch & Loewenstein, 1991), gender (Siorowska, 2011; Foroughi, et al., 2013), or their normative evaluation of the current buying behaviour (Rook & Fisher, 1995; Chomvilailuk & Butcher, 2014), the influence of other consumers (Luo, 2005; Opoku, 2012; Badgaiyan & Verma, 2015), culture (Kacen & Lee, 2002), and self-construal (Zhang & Shrum, 2008). A summary of the factors that can influence consumers' impulsive buying is given in Table 2.4.

Table 2.4 The factors that can influence the relationship between impulsiveness and impulse buying

| Factors | Author (s) |
|--|--|
| Self-control | Hoch & Loewenstein (1991) |
| Gender | Siorowska (2011) Foroughi, et al. (2013) |
| Culture | Kacen & Lee (2002) |
| Influence from peers | Luo (2005) Opoku (2012) Badgaiyan & Verma (2015) |
| Individuals' normative evaluation | Rook & Fisher (1995) Chomvilailuk & Butcher (2014) |
| Self-construal | Zhang & Shrum (2008) |

Hoch & Loewenstein (1991) argued that impulse buying can not only be viewed as a single term, but can also be viewed as a kind of buying behaviour that can be influenced by consumers' self-control ability, and the self-control ability can moderate the general impulsiveness desire and impulse buying. Hoch & Loewenstein (1991) pointed out that impulse buying can result from the conflict between desire and willpower; when the increased proximity boosts desire and moves the consumer rightward to cross over the "buy line" then the desire dominates willpower, and thus impulse buying might happen. Moreover, Foroughi, et al. (2013) stated that gender can be a moderator of impulse buying as many men do not like shopping and are not likely to act on an impulsive urge, while women generally like walking slowly through stores and enjoy shopping. Then these give room to the speculation that by using the browsing method when making a purchase could reduce the chances to buy impulsively (Siorowska, 2011). Culture has been identified as a moderator of impulse buying in Kacen & Lee's (2002) research, where it was found that culture can moderate many aspects of consumers' impulse buying, such as self-identity, normative influence, etc. For the normative influence related to impulse buying, Rook and Fisher (1995) also argued that consumers were more likely to behave based on their impulsiveness when they thought the current buying is approvable (Chomvilailuk & Butcher, 2014). Moreover, Luo (2005), Opoku (2012) and Badgaiyan & Verma (2015) pointed out that consumers were more likely to behave consistent with their impulsive urge if they were shopping with their peer group. Additionally, Zhang & Shrum (2008) argued that consumers' impulse buying can also be moderated by their self-construal: dependent consumers would have more willingness to express their immoderate impulsiveness while independent consumers would be more likely to behave consistent with their immediate impulsiveness buying urge.

According to the nature of this current research, which is investigating the effect of collective social norms on impulsive buying, the related factors (i.e. normative evaluation, influence of others and self-construal) are discussed below.

The effect of normative evaluation on impulse buying

Rook and Fisher (1995) stated that although impulse buying was normally viewed as a specific buying behaviour which has no prior buying intention, it may cause negative consequences, such as problems of personal finance, feeling guilt after purchase, and regret (Rook & Hoch, 1985; Rook, 1987). However, some impulse consumption situations can be viewed as neutral or even as a positive buying behaviour, e.g., buying in a charity auction, spontaneous purchase of a gift for an ill friend, etc. (Rook & Fisher, 1995). Whether consumers would behave consistent with their general impulsiveness might depend on their personal evaluations on a specific impulse buying behaviour: Rook and Fisher (1995) hypothesised that although consumers who were identified as high in impulsiveness might be more likely to display real impulse buying behaviour than others, whether they would actually engage in such a behaviour might also depend on their own evaluation of the particular buying behaviour. When their evaluation of the particular buying behaviour is positive, then their buying impulsiveness trait and normative evaluation are harmonious and they are more likely to make a real purchase (Kropp, et al., 1999). However, if they have a negative evaluation of the particular buying behaviour, their buying impulsiveness trait may be thwarted and lead to the result where even a high impulsiveness consumer would be less likely to behave consistent with their impulsiveness trait (Amos, et al., 2014; Cunha & da Silva, 2015).

This hypothesis was confirmed in their first study: a significant relationship was found between consumers' impulsiveness trait and buying behaviour in the positive evaluation

group ($r = 0.33, t = 3.47, p < 0.01$), but no relationship was found in the negative evaluation group ($r = -0.002, t = -0.02, p > 0.10$) (Rook & Fisher, 1995). Moreover, Rook and Fisher (1995) further divided the samples into three sub-groups based on their degree of normative evaluations on the given impulse buying behaviour in the experiment, and the correlation between buying impulsiveness and the projective measure of impulse buying was significant only within the most favourable group (r (favourable) = 0.36, $t = 3.11, p < 0.01, n = 69$; r (neutral) = 0.10, $t = 0.82, p > 0.10, n = 69$; r (unfavourable) = 0.08, $t = 0.72, p > 0.10, n = 74$). The results were consistent with the results of the previous one, and they also confirmed that the effect of consumers' evaluation of a particular purchase on the relationship between impulsiveness trait and actual behaviour is not linear (Rook & Fisher, 1995, study 1, p.309; Bharadwaj & Sharma, 2015; Cunha & da Silva, 2015).

The effect of shopping with others on impulse buying

Although Rook and Fisher's research contributed to the study on the relationship between consumers' general impulsiveness traits on final impulse buying behaviour, they only focused on the consumers themselves, i.e. they did not consider the influence of the environment (Cobb & Hoyer, 1986; Rook, 1987; Rook & Fisher, 1995; Tice, et al., 2001; Ghani & Kamal, 2010; Mehta & Chugan, 2013). Based on Rook and Fisher (1995), Luo (2005) further argued that the shopping environment might influence consumers' impulse buying; for example, others in the shopping environment might influence consumers' actual buying behaviour (Opoku, 2012). Luo (2005) stated that consumers might follow others' opinions and behaviours; alternatively, they might use others' justification for their own, and they might use others' opinions and behaviours as visible indicators of socially desirable behaviours (Zajonc, 1965; Liu & Laird, 2008; Roberts & Manolis, 2012). This type of influence was also considered in the Theory of Reasoned Action: behavioural intentions

could be determined by both the attitude towards the behaviour and the motivation to comply with social norms (Fishbein & Ajzen, 1975).

The effect of that influence might depend on the groups' norms and common beliefs (Kropp, et al., 1999; Roberts & Manolis, 2012). Luo (2005) assumed that the presence of family members might decrease the urge to purchase, as family members might discourage waste and extravagance based on a sense of responsibility to others; therefore, consumers might consider impulse buying as an undesirable buying behaviour; in contrast, the presence of peer group members might increase the urge to buy as they might encourage spontaneity and the pursuit of hedonic goals (Heckler, et al., 1989; Abrams, et al., 2000; Baumeister, 2002; Liu & Laird, 2008; Opoku, 2012). Luo (2005) also hypothesised that the effect of the presence of others is likely to be greater when the group (family or peers) is cohesive than when it is non-cohesive (Forsyth, 1999).

An experimental design was used in Luo (2005), and the consumers' impulsive urge was measured by a seven-point Likert scale which contained four items, e.g. *"I experienced a number of sudden urges to buy"*, etc. (Cronbach' $\alpha = 0.83$); and the measure of five purchase alternative decisions was used to assess consumers' imagined impulsive purchase. The purchase choices included *"buy only the socks"*, *"want the sweater and not buy it"*, etc. (p.290).

The hypotheses were confirmed in Study one. The presence of peers ($M = 4.39$) increased the imagined impulse buying while family members ($M = 3.40$) decreased that, $F(2,127) = 3.47, p < 0.05$; and that difference is greater in the manipulated cohesive group (4.68 vs. 3.05 for peer vs. family members, respectively) than in the non-cohesive group (4.10 vs. 3.74, respectively) (Luo, 2005; p.291). Moreover, the interactive effect of individual difference in susceptibility with group type was confirmed in Study two. For impulsive urge,

the effect of group type (peer or family) was greater when the group was cohesive and consumers held higher susceptibility ($M = 5.85$ vs. 2.35) than any other conditions, $F(1, 104) = 6.30, p < 0.05$. For imagined likelihood of purchasing, the effect of group type was greater when the group was cohesive and consumers were susceptible to influence ($M = 3.81$ vs. 2.10), $F(1, 104) = 3.87, p < 0.05$. (Luo, 2005; study 2, p.292).

Compared with the previous studies, Luo (2005) contributed to the limited knowledge on the impulse buying behaviour by considering the influence of the social environment.

The effect of self-construal on impulse buying

More and more factors that might influence the trait-behaviour relationship between consumers' impulsiveness and impulse buying behaviour were studied (Rook & Fisher, 1995; Luo, 2005; Zhang & Shrum, 2008). Except for Luo's (2005) study on how consumers' different acceptance to the presented others' influence can influence impulse buying differently, Zhang and Shrum (2008) investigated how consumers with different susceptibility to the normative information would behave differently in impulse buying from the self-construal view-point. Zhang and Shrum (2008) viewed impulse buying as the result of the goals' conflict between pleasure-seeking and self-regulatory, and the individual's level of buying impulsiveness was explained as the individual differences in the accessibility of the goals of pleasure-seeking and self-regulation (Markus & Kitayama, 1991; Puri, 1996; Shiv & Fedorikhin, 1999; Ramanathan & Menon, 2006). The authors argued that consumers with dependent self-construal might weigh their goals of social cohesion and social norms consistency as more important than their personal uniqueness, while consumers with independent self-construal may weight their goals of expressing their uniqueness and following their own attitudes as more important than conforming with the social groups' common beliefs (Trafimow, et al., 1991; Ybarra & Trafimow, 1998). Therefore, consumers

with dependent self-construal may have greater motivations to suppress their buying impulsiveness than consumers who have independent self-construal (Singelis, 1994; Zhang & Shrum, 2008; Burgess, et al., 2014). In Zhang and Shrum (2008), consumers who had independent self-construal were identified with a higher possibility of beer consumption³ and problematic alcohol consumption⁴ than consumers who had dependent self-construal; and consumers who had independent self-construal also held a more positive attitude towards immediate beer consumption than dependent ($M = 5.65$, $M = 4.53$ for the independent and dependent respectively, $SD = 1.43$) (Zhang & Shrum, 2008).

Zhang and Shrum (2008) not only contributed to a better understanding of how different self-construal can influence social information's effect on impulse buying, but also further verified the assumptions that the social information in a particular buying situation can influence consumers' final impulsive buying behaviours (as in Luo (2005)).

The results of these research studies which investigated the moderating factors on the relationship between impulsiveness and impulse buying indicated that consumers, as members of the society, are strongly influence by the social environment (Sumner, 1906; Sherif, 1936; Latane & Darley, 1970; Krebs, 1970; Fishbein & Ajzen, 1975; Pepitone, 1976; Shaffer, 1983; Krebs & Miller, 1985; Cialdini, et al., 1990; Cialdini, et al., 1991): consumers' impulse buying decisions can be influenced by their perceived normative information on specific buying behaviour (Rook & Fisher, 1995); the important others' normative evaluation upon a particular purchase can also moderate the relationship between consumers' impulsiveness and impulse buying (Luo, 2005); and consumers with different self-construal

³ $\beta = 0.38$, $p < 0.01$, between individualism and beer consumption in the country-level analysis; $\beta = 0.83$, $t(28) = 5.07$, $p < 0.002$, in the state-level analysis.

⁴ $\beta = 0.44$, $t(42) = 3.20$, $p < 0.003$, in the state-level analysis.

hold different levels of susceptibility to the normative information which can also moderate the relationship between consumers' impulsiveness and impulse buying. Therefore, it is sensible to study how the social environment (e.g. social norms) can influence consumers' impulse buying.

2.3 Social norms

2.3.1 Social norms – definitions

The researchers in psychology and social science defined norms in various ways. Sumner (1906) described norms as “*folkways*” because they are the common behaviours of a group and appear to meet the basic needs of the group beneficially. Sheriff (1936) defined norms as common guidance and joint agreements for social behaviour, the “*customs, traditions, standard, rules, values, fashions, and all other criteria of conduct which are standardized as a consequence of the contact individuals*” (p. 3). Peptone (1976) viewed norms from their normative aspect specifically, and described them as more characteristic social behaviour or more identical common behaviour in a collective group than observed individuals at random.

Norms differ in the extent of what information they deliver. It can express what is normal in a certain situation and what is socially approved or sanctioned in a certain situation (Shaffer, 1983; Cialdini, et al., 1990; Cialdini, et al., 1991). It can refer to either descriptive norms – what is commonly done by others in the similar situation; or injunctive norms – under a specific situation, what is commonly socially approved or unapproved (Shaffer, 1983; Cialdini, et al., 1990; Cialdini, et al., 1991). Moreover, as a part of commonly accepted rules, norms have included the standards for conducting social behaviour and the rules forbidding

unapproved behaviour which have been established by a public body or a government (Triandis, 1994; Maurice, 2013).

Based on norms' primarily *social* character, this PhD research particularly focuses on social norms. Social norms are the joint agreements in a group and have been understood by the group members, and they can guide or constrain members' social behaviour in a group without using the force of law (Cialdini, et al., 1990; Cialdini, et al., 1991). Social norms were developed from the communications with other members in the group, and the penalties for not abiding by social norms do not come from legal systems but social networks (Latkin, et al., 2009; Uski & Lampinen, 2014) .

The conceptualizations of social norms vary according to the general social behaviour guidelines for the behaviour in a group (Blake & Davis, 1964; Pepitone, 1976), how important others think the behaviour to be (Fishbein & Ajzen, 1975), the behaviour standard emerging from the observation (Cialdini, et al., 1990), and the internal self-view of the behaviour (Schwartz, 1977).

In the early stage social norms research, some researchers focused on how social norms act as an explanatory factor to explain why people have such a behaviour (Latane & Darley, 1970; Krebs, 1970; Krebs & Miller, 1985), and those conceptualizations of social norms contributed to the explanation of how social norms can direct and influence people's behaviour. The theoretical development of social norms has further defined when social norms can influence people's behaviour, under what kind of situation it can affect people's behaviours most significantly (Cialdini, et al., 1990; Cialdini, et al., 1991), and how it can help people fulfil the desire to achieve the basic goals of social influence (Reckwitz, 2002), e.g. having effective act on (Bearden, et al., 1989), staying in affiliation with others and keeping a positive self-concept (Kropp, et al., 1999; Roberts & Manolis, 2012).

2.3.2 How social norms are formed and transmitted

In order to better understand social norms, researchers focused on their origins (Fishbein & Ajzen, 1975) and how they are transmitted in social groups (Allison, 1992), e.g. how norms emerge (Cialdini, et al., 1991), adapt and are shared in social groups (Cialdini, et al., 1990).

There have two different perspectives for the answers to how norms have been shaped in the social system. One perspective argues that norms vary between groups because cultures vary in different groups; and norms are arbitrary rules for the approved behaviour which are valued or reinforced by the culture within a specific group (Berger & Luckmann, 1966; Opp, 1982; Solomon, et al., 1991). The other perspective argues that group-approved behaviours which have been guided by social norms, can help the group in accomplishing their goals, so norms play as a functional and aiding factor in this process (Sumner, 1906; Sherif, 1936; Campbell, 1975; Allison, 1992), and the inappropriate and ineffective norms should be cleaned out in the social selection process (Jacobs & Campbell, 1961; Schaller & Latané, 1996).

The primary distinction between those two perspectives is the extent which social norms may sustain arbitrary patterns of behaviours. A closer examination of how norms emerge and are passed on to others argues that both perspectives can account for normative behaviour.

How social norms emerge within the social system from the societal-value perspective

The anthropological traditions of Boas and Mead (i.e. the theory in the culture and personality anthropology) have long held the view that norms are capricious and can specifically depend on the group culture in which it spreads (Linton, 1936). Influenced by

these anthropological traditions, some theorists stated that the power of the norms are different depending on their different values to the group culture where the norms are active (Finnemore, 1996; O'Reilly & Chatman, 1996). That is, the nature of any norm is neither fundamentally good/bad nor fundamentally valuable/worthless; the power of the norm is based on the acceptance of the culture (Berger & Luckmann, 1966; Solomon, et al., 1991). This perspective came from the dilemmas faced by the anthropologists in their early research when they had no knowledge of the bizarre behaviours in a culture. For example, the cannibalism is incomprehensible within a western receptivity (Sumner, 1906).

Opp (1982) suggested that one of the most significant characters of social norms which guide our daily behaviours is evolution: social norms were evolving according to the behaviours performed and rewarded time after time; the reward power makes these kind of behaviours become the preferred choices for group members under specific situations (Sumner, 1906; Berger & Luckmann, 1966).

Cialdini and Trost (1998) further explained three conditions which might influence the strength of social norms. First, group members should have opportunities to communicate with others and then deliver the norms between members; second, the members in the group are cohesive and value unified behaviours; third, the group thinks the norm is valued and important for all its members. Once the preferences were determined and the punishments for non-consistent behaviours were formed, the members in the social group would discourage deviant actions by voicing what they “*should*” do as a member in the group (Sumner, 1906; Berger & Luckmann, 1966; Opp, 1982). Then the group members, at that moment, accept and internalize the norms, and the sanctions for unapproved behaviours might be developed to support the norms (Reynolds, et al., 2014).

From the reinforcement perspective, norms can be any behaviours which are valued and rewarded by the group, allowing the patterns of arbitrary behaviour to appear on a cultural level, and the local norms can appear at random (Helbing, et al., 2014). For example, wearing kilts (Pai, et al., 2013) and wearing cowboy hats are a norm for Scottish men and men from Montana (Denzin, 2015) respectively. Similarly, the norms for how to prepare food vary dependent on the local cultural traditions, e.g. the difference between the Irish and the French when they preparing potatoes – boiled versus fried (Cialdini, et al., 1991).

Moreover, Sherif (1936) noted that these kind of norms emerged also because shelter, food and mating were humans' basic needs. He described this as *"how and under what circumstances they will eat, mate and enjoy shelter are, to a great extent, regulated by customs, traditions, laws and social standards"* (p. 1). So social norms were developed to meet humans' basic needs and desires.

How social norms emerge within the social system from the functional perspective

Consist with Sherif's (1936) comments on how social norms emerged, some social theorists hold the opinion that social norms play a functional role in humans' progress. They argued that social norms emerged to help humans' survival by encouraging beneficial behaviours and limiting harmful behaviours, both at the individual level (Sherif, 1936) and group level (Sumner, 1906; Campbell, 1975; Pepitone, 1976).

In this functional perspective, social norms appear neither randomly nor insignificantly as they act as an important element for humans' survival (Cialdini, et al., 1991). Because humans' ability to develop and share social norms is adaptive, in humans' evolutionary process social norms were also adapted, which helped with human survival (Campbell, 1975; Allison, 1992; Schaller & Latané, 1996). Humans are a living species and they have the

ability to balance themselves and the group (Sumner, 1906; Campbell, 1975; Triandis, 1994; Baumeister & Leary, 1995). They can understand and imitate the rules which are commonly practised in the group environment where they live (Allison, 1992). Social norms can evolve via genetic (Allison, 1992; Campbell, 1975) and cultural mechanisms (Campbell, 1975; Bonner, 1980; Lumsden, 1988). No matter through which mechanism social norms developed, they played an important role in balancing individuals' selfish desires and the group's survival, as well as the need for social control (Campbell, 1975; Triandis, 1994).

Schaller & Latané (1996) argued that as social norms could be viewed as a species from the functional perspective, therefore they evolved in a very similar way as the natural selection. They emerged during the process of communication among members in a social group, aiming to establish the most effective, informative and relevant behaviour patterns (Schaller & Latané, 1996). That is, under the selective pressures, the successful social norms which could promote survival would be retained and the behaviours consistent with these norms were approved by the group. For example, the useful actions on acquiring food and shelter, mating, communicating with others, and obtaining status which related to the survival-promoting norms were retained (Wong & Candolin, 2015). Meanwhile, the unsuccessful norms which might bring incorrect and inaccurate behaviours in promoting survival would neither be imitated nor be passed onto the next generation like maladaptive genes (MacNeil & Sherif, 1976).

Lumsden (1988) gave an illustration of the distinction between these two perspectives on how social norms were formatted in the social system. In the formation of the social norm of sibling incest avoidance, Lumsden (1988) indicated that cultural anthropologists assumed sibling incest avoidance was "*guided by idiosyncratic cultural systems of taboos and rituals*" (p. 245), but the fact is that the social norm of sibling incest taboos exist in almost every

society in the world as a universal norm. Additionally, many recent genetic studies confirmed that the rates of genetic deformity are much higher in the offspring of consanguineous marriage than in the offspring of nonrelatives (Tadmouri, et al., 2009; Bittles & Black, 2010). From the functional perspective, this successful reproduction for survival actually was enhanced by this social norm of sibling mating taboos.

Treating the cultural differences with respect and awe was important for social psychologists when they approached research with the reason “*certain that behind the bizarre form lies a functional wisdom that [we] have yet to understand*” (Campbell, 1975; p.1105). This viewpoint combined the societal-value and functional perspectives on how social norms emerged and developed together, thus providing an integrated framework. As noted earlier, the traditions and customs are different across cultures (Berger & Luckmann, 1966; Solomon, et al., 1991). In every society there are primary needs that should be fulfilled, but the ways of fulfilling these needs would vary depending on the immediate physical environment and local culture (Sherif, 1936). For example, in every culture there is a custom of greeting because it can distinguish friends from strangers and enemies. But the way to express greeting varies in different cultures, e.g. handshake, kiss on the cheeks and raised palm, etc. In addition, tie signs after attaching to someone exist in many cultures. However, these signs can be different between cultures, e.g. wearing ankle bracelets or finger rings, adding tattoos on the face or forehead dots, etc. (Cialdini, et al., 1991).

The disordered social norms which cannot fulfil society’s overarching need or have no benefit for achieving the ultimate goal, such as acquiring food and shelter, reproducing, communicating with others, and obtaining status, etc., would have little chance to be kept and to be passed onto later generations (Sumner, 1906; Sherif, 1936; Schaller & Latané,

1996). In other words, only successful social norms could exist and stay effective through people's sharing and communicating with other members in the group.

Spread of social norms

Sharing with others is one of the most important features of social norms; social norms would not exist without sharing (Cialdini, et al., 1991). People share social norms with others in the social group, such as family members, co-workers, friends, strangers or on social media. Moreover, because norms are a kind of belief system based on sharing, it can be examined from both the individual perspective (an individual's psychological system) and the collective perspective (sociocultural system) (Berger & Luckmann, 1966; Campbell, 1975; Pepitone, 1976; McKirnan, 1980).

The spread of norms varies dependent on the different levels of their intentionality. Normative behaviours can be passed on through demonstration, active instruction, and rituals etc. (Lumsden, 1988; Allison, 1992). For example, toddlers who attended religious services with their families would invariably be trained to keep quiet during the service. Some norms can also be passed on in a more passive way, such as imitation or nonverbal behaviours (Lumsden, 1988; Allison, 1992). For example, researchers found that fathers would like to give dolls to their baby daughters more than to their sons (Snow, et al., 1983), and this would encourage sex differences for play activities between boys and girls (Lytton & Romney, 1991). There are some other norms that can be inferred from the immediate environment around people without direct training or implicit support (Rutte, et al., 1987; Cialdini, et al., 1990; Cialdini, et al., 1991). For example, Buunk & Bakker (1995) found that one's friends' involvement in extradyadic sexual behaviour could affect one's willingness to engage in it. Although the spread of social norms varies, social norms can only have effect on behaviours through communication regardless of their origin.

The important role that communication plays in social norm transmission was emphasized in the Theory of Social Impact (Latane, et al., 1994; Latane, 1996). Latane (1981) defined the society as a “*self-organizing complex system composed of interacting individuals each obeying simple principles of social impact*” (p. 6). Based on the original model of social impact theory, Latane (1981) described how the distance (immediacy) between the source and the influence target, the power of the source’s personal influence, and the source’s amount can contribute to the explanation of clustering behaviours in societies, such as local dialects. Latane (1996) further modelled how this “*dynamic iterative process of reciprocal and recursive influence*” (p. 2) can affect the members’ tendency to engage in one clustering behaviour by using computer simulations. The simulations showed that people can be easily influenced by local agreements such as attitudes and beliefs which have been agreed by those who are in their immediate physical space. Although subcultures make it possible for less popular social norms to exist, the societies that they can influence are smaller and these social norms live on the fringes of the leading group. By such means, every individual can be influenced by other group members and can influence others in the immediate environment. The society that people live in can then be defined as a “self-organizing, complex system” (Cialdini, et al., 1991).

2.4 The classifications of social norms

Social norms are the guidelines for social behaviours which can be observed more commonly in a collective group than viewed individually (Pepitone, 1976). Although norms have been defined in a variety of ways (Sumner, 1906; Sherif, 1936; Shaffer, 1983; Cialdini, et al., 1990; Cialdini, et al., 1991), there is no doubt that norms are social phenomena, and they would not exist without communications (Kincaid, 2004). Based on norms’ primarily

social character, collective social norms have been viewed as the joint agreements in a group which have been understood by the group members, and such agreements can be used to guide or constrain group members' daily social behaviour (Cialdini & Trost, 1998). A norm from the collective level can be a rule guiding individual decisions concerning rituals, beliefs, traditions, and routines and the group members' behaviours at the individual level can be guided by the social norms imposed at the collective level (Fent, 2007). This current research is investigating the effect of social norms on impulse buying from the collective level, which are the general guidelines for group members' daily social behaviours.

The performance of social norms is visible in two types of individual behaviours, depending on the role that the individuals play. The first type views individuals as influence targets which involve the reflexive and felt obligation to behave according to the norms. The second type views individuals as influence agents which hold the opinion that other group members are obligated to behave based on the norms (Jasso & Opp, 1997). In the literature, researchers paid more attention to why people would yield to social norms that exist in a society rather than on why people would choose to influence other group members, as they are more intriguing and instructive (Cialdini & Trost, 1998). Accordingly, this PhD research would like to study the influence process from the perspective of the influence target and explore what they can gain from the influence process.

Social norms are the informal expectations and unwritten rules by which a society controls the behaviour of its members (Hiebert, 2018). Although social norms have many characteristics, according to "*the most commonly recognised characteristic of a norm is a shared belief that persons ought or ought not to act in a certain way*" (Gibbs, 1965; p. 589), social norms can be classified into either prescriptive norms or proscriptive norms dependent on which polarity it plays on. "*Norms are rules for behaving: they say more or less*

specifically what should (prescriptive norms) *or should not be done* (proscriptive norms) *by particular types of actors in given circumstances*” (Williams, 1968b; p. 284). For example, helping others in need is viewed as a prescriptive norm in our society; while littering and speaking loudly in public places are viewed as proscriptive norms.

Moreover, social norms can refer to either descriptive norms or injunctive norms, depending on how they express the normative information. The types of social norms are different dependent on what kind of information they deliver; they can express what is normally done in a certain situation (descriptive norms) or what is socially approved or sanctioned in another situation (injunctive norms) (Shaffer, 1983; Cialdini, et al., 1990; Cialdini, et al., 1991). Descriptive norms deliver the information of what has been done regularly by the group members under a certain situation (i.e. most college students do not drink to excess, people shake hands with others when greeting, etc.); while injunctive norms deliver the information of what kind of behaviours are commonly socially approved or unapproved (i.e. people should not buy clothes made with real fur, smoking in the elevator is unacceptable in UK, etc.) (Shaffer, 1983; Cialdini, et al., 1990; Cialdini, et al., 1991), and they may also include punishments that have been imposed by a social group for unapproved behaviour in a group (Triandis, 1994).

The representations of social norms include general guidelines for members about suitable behaviours in a group (Blake & Davis, 1964; Pepitone, 1976), the standards of behaviours which emerged from the observation of the behaviours of most group members (Cialdini, et al., 1990), the opinions that important others hold for the behaviours (Fishbein & Ajzen, 1975), and the self-view people have for their behaviours (Schwartz, 1977), etc. As the latter three representations of social norms could be established based on the first one which acts as a basic start in the society, the PhD research views social norms from the most basic

viewpoint – the general collective guidelines for members’ social behaviours – and explores how collective social norms can guide or change people’s behaviours in the context of impulse buying.

2.4.1 Prescriptive norms and proscriptive norms

Some researchers pointed out that although there are various classifications of social norms, the basic characteristic of a social norm is a shared social behaviour standard of what should be done or what should not be done under a certain situation in a collective social group (Williams, 1968b), and whether a person ought or ought not to behave in a certain way under some specific circumstances (Gibbs, 1965). Accordingly, social norms can be classified into either prescriptive norms or proscriptive norms depending on which polarity they play on. Prescriptive norms describe what the society encourages while proscriptive norms describe what the society discourages (Coleman, 1990; Jasso & Opp, 1997). Examples of prescriptive norms and proscriptive norms are shown in Table 2.5.

Table 2.5 Examples of prescriptive norms and proscriptive norms

| Prescriptive norms | Proscriptive norms |
|--|---|
| Helping others | Deviant drinking |
| Animal protection | Littering |
| Environment protection | School rules inform children that tardiness is unacceptable |
| Respect for older adults and the disabled | Jump lines |
| Greeting friends | Buying real fur products |

(Source: British Council, 2012)

As a member of the society, an individual is influenced by the social norms and learns how to behave in the society from birth. People understand and imitate the rules which are commonly practised in the group environment (Allison, 1992). For example, in many countries, people would not belch or speak loudly in public because they know that it is rude and social norms do not approve of such behaviours; meanwhile, people are likely to hold the doors open for the people behind them and apologize after they sneeze in some public places (Cialdini, et al., 1991).

Prescriptive norms, as defined by Coleman (1990), are social norms that express what kind of acts should be carried out in a certain situation, e.g., saying “thank you” after we receive a favour from others, excusing oneself after a cough and shaking hands when we meet our friends, etc. These behaviours are encouraged by the society; engaging in these behaviours may receive social rewards such as others’ respects, while violating them may render punishments.

Proscriptive norms describe the behaviours which are discouraged by the society, and how individuals should not behave (Coleman, 1990). As with prescriptive norms, proscriptive norms have many categories, for example, individuals are discouraged from drinking to excess, answering a call loudly during a movie in a cinema, and returning items to a library after the due date, etc.

In general, the two kinds of social norms are playing on opposite sides. Many societies favour prescriptive norms but frown on proscriptive norms (Cialdini, et al., 1991). As social norms may differ between different societies, a norm may be viewed as a prescriptive one in one society but as a proscriptive one in another society (Mackie, et al., 2015). For example, a kiss on the cheek when people meet their friends is customary in many European countries, such as France, but considered strange in many eastern countries, such as China (Tischler,

2010). Moreover, as social norms evolve with time, a behaviour may be considered as a prescriptive norm at one time, but a proscriptive norm at another time (Cialdini, et al., 1991). For example, foot-binding was a prescriptive norm in ancient times in China, but it became a proscriptive norm from the late Qing Dynasty (Keeling, 2008).

2.4.2 Descriptive norms and injunctive norms

As social norms express the normative behaviours in a group, social norms can vary between descriptive norms and injunctive norms, dependent on the different ways of how normative information is delivered (Shaffer, 1983; Cialdini, et al., 1990; Cialdini, et al., 1991; Triandis, 1994). Examples about descriptive norms and injunctive norms are shown in Table 2.6.

Table 2.6 The examples of descriptive norms and injunctive norms

| | Descriptive norms | Injunctive norms |
|---|--|--|
| Protect the environment (Cialdini, 2007) | “Join your fellow citizens in helping to save the environment” | We should protect the environment by reusing the hotel towel |
| College problem drinking (Borsari & Carey, 2003) | Majority college students don’t do problem drinking behaviour | Problem drinking is an acceptable behaviour in college |

Descriptive norms refer to expressing “what the norm is” from large observation of what most others do (the norms of “is”). On the other hand, injunctive norms express what kind of behaviours are approved and unapproved in the peer group (the norms of “ought”), and assist individuals to determine what kind of social behaviours are acceptable (Shaffer, 1983; Cialdini, et al., 1990; Cialdini, et al., 1991), and also indicate punishments for unacceptable social behaviours (Triandis, 1994).

Behaving in line with social norms can help individuals achieve different goals as a member in the group, e.g. assisting individuals to act effectively. Under the guidance of social norms, individuals can build and maintain social relationships with others in the peer group (Cialdini & Trost, 1998).

Descriptive norms

Individuals can achieve the maximum effectiveness of their social behaviours with descriptive norms operating in similar situations (Shaffer, 1983; Cialdini, et al., 1990; Cialdini, et al., 1991). Descriptive norms are obtained from what others do in the situation. Moreover, the perceptions of what most others usually do in a certain situation can provide guidance about what is “normal” in an ambiguous or novel situation for individuals (Stiff, 1994; Gilbert & Malone, 1995).

People are motivated to behave in a more effective way and to try to make accurate decisions (Cialdini & Trost, 1998). This kind of competence has been described as “*an organism’s capacity to interact effectively with its environment*” (White, 1959; p. 297). White (1959) also argued that this kind of ability to perceive and deal with the immediate environment was present from birth and worked as an adaptive strategy with the social environment where people can understand and communicate with others effectively (White, 1959; Cialdini & Trost, 1998).

People use the social reality presented by others as a reference for how to behave in a certain situation where the appropriate behaviour is not clear (Festinger, 1954). Moreover, as members in the society, people can perceive information from others about the consensus. The larger the number of people who behave in the same way to respond to a specific situation, the more correct individuals would think the behaviour should be (Thibaut &

Kelley, 1959). There are a variety of studies indicating that others' behaviours can actually shape people's understanding towards the situation and further influence their response to that situation, even if there is no explicit indoctrination (Milgram, et al., 1969; Böhm & Pfister, 2015; Hytten, 2015). For example, Milgram, et al. (1969) manipulated a group of confederates by asking them simply to gaze up into the sky on a street corner, and they found 84 percent of the pedestrians who passed the street did the same as the confederates.

Why people followed the confederates' behaviour was explained by Cialdini (1993) as the kind of "social proof" for a particular behaviour expressing the probability of behaving effectively; people believed that behaving consistent with the sufficient support from others can help to save time and cognitive effort (Cialdini, 1993). Moreover, people are most likely to use proven evidence from others to decide their own actions when the situation is unclear, ambiguous and novel (Sherif, 1936; Deutsch & Gerard, 1955; Tesser, et al., 1983). Although people are likely to use social evidence from others to guide their behaviours in a similar situation, the imitation is not adapted randomly. As Allison (1992) noted, "*Imitation may be ubiquitous but it is not indiscriminate*" (p. 284); the influential power of social support will be stronger when it comes from the reference individuals (Festinger, 1954) or the evidence from people who have visible signs of success (Allison, 1992).

In order to determine the influential power of descriptive norms on people's behaviour, Cialdini, et al. (1990) designed a series of studies in different natural settings and observed people's littering behaviour when different descriptive norms about littering were manipulated.

In their studies, Cialdini, et al. (1990) manipulated the descriptive norms about littering by setting different amount of litter in a parking garage and an amusement park separately; the amount of litter in the environment expressed different descriptive norms: when the

environment was clean, it delivered the anti-littering descriptive norm; and when the environment was littered, it delivered a pro-littering descriptive norms. A handbill was always provided to the subjects on their car's door handle, making it possible for the subjects to have something to litter. The important role that descriptive norms play in the guidance for people's behaviours was verified in the first few studies: regardless of whether the descriptive norm was anti-littering or pro-littering, most subjects exhibited norm-consistent behaviour on littering; in other words, the frequency of littering behaviour was much higher in the littered setting than in the clean setting. What was more, the subjects' tendency to behave in the consistent way with anti-littering or pro-littering descriptive norms was much more significant when their attention was on the descriptive norms. For example, when there was a confederate modelling the littering behaviour in a littered environment, the subjects' attention was drawn to the littered environment; then they had the strongest tendency to behave consistent with the littering descriptive norm in that setting. Otherwise, when the confederate modelled the littering behaviour in a clean environment, the subjects' attention was on the clean environment which delivered an anti-littering descriptive norm; then they littered less under the same setting.

By definition, descriptive norms can deliver social proof of how to behave in a particular situation, and people are likely to behave consistent with those norms in order to maximize their social behaviours' effectiveness (Shaffer, 1983; Cialdini, et al., 1990; Cialdini, et al., 1991). This consistency is because humans believe this kind of "social proof" can help them attain the right way of living (Cialdini & Trost, 1998).

Bunk and Bakker (1995) reported that people's perceptions about their friends' willingness to engage in extrayadic sexual behaviour and the experience of their friends can both affect their own willingness to engage in that behaviour. Rutte, et al. (1987) designed two scenarios

with different descriptive norms in their studies about how much money the participants could get from the common pool under a scarcity or abundance condition by using a dilemma task: one scenario, which set a selfishness norm, described those who leave the trail earlier as harvesting more money than their share; the other scenario, which set a generosity norm, described those who leave the trial earlier as harvesting less money than their share. Their results were consistent with the opinion that people looked into other group members' behaviours to determine what they should do and how much money to get (Cialdini & Trost, 1998). In the selfish scenario, people behaved in a more selfish manner after they saw the people who left the trail earlier in a selfish manner; while in the another scenario, people behaved more generously after they saw the people who left earlier harvested from the trail in a generous manner (Rutte, et al., 1987). The results also supported the notion of when the appropriate behaviour in a particular situation is not clear, people decide what they should do based on what others do (Stiff, 1994; Gilbert & Malone, 1995). That is because others' behaviours can provide guidance about what is "normal" in an unclear situation (Cialdini & Trost, 1998).

In summary, descriptive norms can guide people's behaviours because they express what is normally done in a certain situation (Shaffer, 1983; Cialdini, et al., 1990; Cialdini, et al., 1991). Based on the different information that the norms deliver, there is a second type of social norms – injunctive norms – which include the information of what is socially approved or disapproved in a certain situation (Shaffer, 1983; Cialdini, et al., 1990; Cialdini, et al., 1991).

Injunctive norms

Injunctive norms refer to the normative information of what should be done and what should not be done in the group; what is more, behaving consistent with injunctive norms results in

social rewards, while any violations towards injunctive norms may result in punishments (Cialdini, et al., 1990). People are motivated to behave consistent with injunctive norms in order to get rewards and avoid punishments (Lapinski & Rimal, 2005).

Besides determining the reality, social norms can also clarify what kind of behaviours are expected by the social world in which we live (Shaffer, 1983; Cialdini, et al., 1990; Cialdini, et al., 1991). Injunctive norms not only simply describe what behaviours are approved and prescriptive, but also describe what behaviours are unapproved and proscriptive (Cialdini & Trost, 1998). People are more likely to behave consistent with the injunctive norms that are delivered by similar others (Hornstein, et al., 1968; Cialdini & Trost, 1998).

The social approval of behaviours is one of the characteristics of social norms which has been used most frequently (Opp, 1982; Allison, 1992). Consistently, Cialdini, et al. (1991) thought injunctive norms “*characterize the perception of what most people approve or disapprove*” (p. 203). Injunctive norms clarify what people “should” do as well as what people “should not” do as group members; although some injunctive norms may be developed into laws, but originally, injunctive norms work like the moral rules in the group which have the influence power without using laws (Cialdini & Trost, 1998). People are motivated to behave consistent with injunctive norms because they want social rewards rather than punishments. For instance, one reason why people feel obligated to help others is because the society prescribes it (Staub, 1972; Berkowitz, 1971; Batson, 1998).

The normative influence of injunctive norms has been identified by Deutsch and Gerard (1955) as the “*influence to conform to the positive expectations of another*” (p. 629). To achieve the goal of creating and maintaining relationships with others, group members avoid behaviours that are not socially approved. This can also reflect humans’ needs of belonging

(Baumeister & Leary, 1995) – people prefer social rewards rather than punishments (Cialdini, et al., 1991; Lapinski & Rimal, 2005).

There are some social phenomena which can be interpreted by injunctive norms, such as the incest taboo, respecting the old and cherishing the young, etc. Newcomb (1943) described the power of injunctive norms as that injunctive norms could confer popularity and social status if people complied with them. Below are two social phenomena where injunctive norms work as an agency which can offer popularity or social status to those who comply with them and these deserve attention.

The first social phenomena was shown by the Bennington College study (1935-1939), which looked at the influence of social and political beliefs in the college. The study found that normative influence emerged in a naturally unfolding condition in the college. As Bennington College was a newly established women's college in the late 1930s when Newcomb worked as a member of the faculty, the female students who came from the East Coast brought their family's conservative political views to the college (Newcomb, 1943). A left-wing political norm arose in the college not only among the students but also the liberal college staff; many popular women in the college embraced the norm after it spread (Newcomb, 1943).

Newcomb (1943) found that the norm was associated with rewards, and also the new students who did not hold left-wing political views would be penalised by advanced students. As the norms about the political views in the college not only expressed what the approval was, but also included the punishments for violation, then the norms were injunctive norms which acted as one underlying influencing factor in the study (Cialdini & Trost, 1998). The understanding of the power of injunctive norms on people's behaviours offered better interpretation for the influence of the social and political beliefs in the college. Left-wing

political views worked as injunctive norms in the college; students were motivated to comply with them not only because they could help them build and maintain relationships with others and integrate to the group, but also that they could help to avoid the punishments resulting from any breach (Newcomb, 1943; Cialdini & Trost, 1998) .

The second social phenomena was the littering norm study. As the environmental concerns arose and drew people's attention from the late 1960s in the US, many Americans accepted littering norms as a component of their collective conscience (Cialdini, et al., 1991). A study about littering behaviour, Cialdini, et al. (1991) examined the subjects' littering behaviours after priming either an anti-littering norm (e.g. "April is Keep Arizona Beautiful Month. Do Not Litter.") or other social responsibility norms by placing a handbill which contained the normative information on their windshield wiper before the subjects came to the car park. By observing people's littering behaviours, the researchers found that when the anti-littering norms or other norms were primed, 10 percent and 25 percent of the handbills, respectively, were thrown on the ground (Cialdini, et al., 1991; study 5). This finding was consistent with the littering trend in the arousal condition in a study which used a strengthened priming task by employing physical arousal (Cialdini, et al., 1990; study 6), which indicated that injunctive norms always had effects on human behaviours.

Although the possible rewards for doing social approval are the underlying motivation for behaving consistent with injunctive norms, and gaining rewards from others is one of the underlying goals of behaving in a consistent way with injunctive norms (Cialdini, et al., 1991; Cialdini & Trost, 1998; Lapinski & Rimal, 2005), there also were some other reasons for people to behave consistent with injunctive norms (i.e. these behaviours made them feel good).

For example, anti-littering norms have been included into the broader injunctive norms – social responsibility norms by some researchers (Stern, et al., 1993). These social responsibility norms indicated that people should help those who need help without considering what reward or return they could get as repayment (Berkowitz, 1971). Batson (1998) also explored the reason for people to display socially responsible behaviours and found these behaviours made them feel good, without thinking about the potential consequences, e.g., the social rewards. Berkowitz & Lutterman (1968) found that those who rated highly in social responsibility tended to do what their group approved of rather than being motivated by the obligation to contribute for the good of humanity in general. Moreover, the source of influence has been identified with an effect on people's willingness to act with norm-consistent behaviour (Cialdini & Trost, 1998). Hornstein, et al. (1968) manipulated a wallet which contained money, ID cards and a letter on the ground in midtown Manhattan. The letter described that the wallet was dropped once before, which indicated that the wallet was dropped again. As the only variable in this research, the letter was designed for either obvious Americans or immigrants who were new to America. The researchers found the similarity of the source could actually affect the subjects' socially responsible behaviour: in the similar American condition, the percentage of returning the wallet to the owner was twice as much as in the non-similar condition. The results of the research supported the notion that social norms are shared beliefs in a clustering group, and people are most likely to be influenced by those similar others.

2.5 Self-construal

2.5.1 The definition of self-construal

Self-construal has been defined as how people perceive the distance between themselves and other people (Markus & Kitayama, 1991; Singelis, 1994). In other words, it shows how people think themselves to be (or not) connected with others in the society (Fiske, et al., 1998; Arnocky, et al., 2007).

Self-construal can be different at both the collective level and the individual level. For example, most English-speaking countries (e.g., Australia, the United Kingdom and the United States) are more individualistic than eastern countries (e.g., China, South Korea) (Oyserman, et al., 2002; Zhang & Shrum, 2008; Christopher, et al., 2010; Christopher, et al., 2012). Western people then value their personal feeling more than eastern people (independent self-construal), and eastern people connected with others in the society closer (dependent self-construal) than western people.

Except for self-construal's difference at the group level, self-construal can also be viewed at the individual level (Singelis, 1994). People with chronical independent self-construal view themselves as independent and separated from others; they are not closely linked with the group, and pay more attention to their uniqueness and individual achievements (Fiske, et al., 1998; Zhang & Shrum, 2008; Bejanyan, et al., 2014). On the contrary, people with predominantly dependent self-construal view themselves as a part of the group and connected with others; they value group harmony, and pay more attention to safety and security (Fiske, et al., 1998; Zhang & Shrum, 2008; Imada & Ellsworth, 2011). Numerous studies have confirmed the distinction and effect of self-construal (Singelis, 1994; Fiske, et

al., 1998; Mandel, 2003). For example, people with dependent self-construal value social safety more than people with independent self-construal (Mandel, 2003). Therefore, they weigh the influence from others and the society more heavily than their own attitudes when they make behavioural decisions (Ybarra & Trafimow, 1998; Mandel, 2003). According to the objective of the current research, which is investigating the effect of self-construal on consumers' impulsive buying behaviour, the individual self-construal types have been used in this current research.

2.5.2 The effect of self-construal on impulse buying

Self-construal's effect on impulsive buying behaviours was developed in the past decades; for example, Luo's (2005) influence of peers on impulse buying studies (Xiong & Jing, 2010), and Zhang and Shrum's (2008) studies on how consumers with different self-construal hold different motivations to suppress their impulsive urge to buy (Verplanken & Sato, 2011), etc.

Luo (2005) argued that the nature of the normative influence on consumers' impulse buying was dependent on the norms and the value of the group: family members may consider impulse buying to be undesirable, while the peer group members may encourage impulse buying independently of their long-range consequences. And the effect of the presence of others is likely to be greater when consumers are cohesive with the group that they belong to than when they are less so. The effect of the presence of others on consumers' impulse buying was confirmed in the first study (Luo, 2005) with a significant interaction of cohesiveness and group type ($F(1, 128) = 6.15, p < 0.05$). Additionally, Luo (2005) further argued that consumers' acceptance of others' influence may vary dependent on different self-construal types. In Luo's (2005) second study, consumers' different level of acceptance

to the influence from others was confirmed with a significant interaction of group type, cohesiveness and susceptibility to the influence. Then, Luo's (2005) research not only explained how the presence of others can influence consumers' impulse buying, but also confirmed that consumers with different self-construal have different acceptance ability to the influence of others' normative evaluations, and this different acceptance ability can further moderate the presented others' influence on their impulsive buying.

Later, Xiong and Jing (2010) further investigated self-construal's effect on impulsive buying when the consumers were shopping with others. In Xiong and Jing's (2010) study, a similar result to those of Luo (2005) was obtained: when consumers were shopping with peers who thought the current impulsive buying was appropriate, there was no significant difference between independent and dependent consumers' impulsive level; while shopping with peers who thought the current impulsive buying was inappropriate, dependent consumers bought less impulsively than independent ones as dependent consumers valued peers' normative information as more important than independent consumers (Xiong & Jing, 2010).

Moreover, some researchers argued that people with dependent self-construal would have a greater motivation to suppress impulsive tendencies than people with independent self-construal (Zhang & Shrum, 2008; Verplanken & Sato, 2011). In Zhang and Shrum's (2008) studies about the influence of self-construal on impulsive consumption, the effect of self-construal on impulsive buying in an alcohol purchasing context was investigated, and the results showed that self-construal has a moderating effect on impulsive buying: consumers with independent self-construal are more willing to impulse buy than dependent ones because independent consumers have less motivation to suppress impulsive tendencies than dependent ones (Zhang & Shrum, 2008). Except for this viewpoint of consumers with different self-construal having different motivations to suppress impulsive tendencies

(Zhang & Shrum, 2008), Verplanken and Sato (2011) studied self-construal's effect on impulsive buying from another angle – the self-regulation viewpoint. They thought impulsive buying was a bad buying behaviour and argued that dependent consumers and independent consumers have different motivations to resist buying impulsively based on the Regulatory Focus Theory (Higgins, 1998; Florack, et al., 2013). Independent consumers were more likely to display impulsiveness-consistent buying behaviour than dependent consumers; dependent consumers were more willing to control their impulsive tendencies as they were more willing to reach out for good things and focus on duties (Higgins, 1998; Verplanken & Sato, 2011).

It is also well documented that an individual actually holds both self-construal types simultaneously no matter which type of chronic self-construal the individual holds (Zhang & Shrum, 2008; Christopher, et al., 2012). Moreover, the effect of self-construal on an individual's behaviours is dependent on which type of self-construal has been activated at that time (Trafimow, et al., 1991; Singelis, 1994; Zhang & Shrum, 2008; Ferenczi, et al., 2015), so it is possible for individuals to hold different types of self-construal under different circumstances. For people in individualistic societies, although they hold both dependent and independent self-construal types, the independent one tends to be activated most often and then is most likely to guide behaviour (Zhang & Shrum, 2008). Moreover, individuals with a general independent self-construal can change to dependent self-construal because the activation of self-construal can be manipulated easily (Hamilton & Biehal, 2005; Zhang & Shrum, 2008). Therefore, it is important for researchers to understand which self-construal type individuals hold in a particular situation if they want to get a proper understanding of the effect of social influence on individuals' behaviours.

2.6 Conclusion

This chapter started by reviewing different definitions of impulse buying and the existing measurement scales which can be used to identify whether a consumer is an impulse buyer and measure his/her impulsiveness. Then this chapter reviewed the power of social norms on human behaviours, which offers a theoretical background for the understanding of why many companies involve social norms in their marketing campaigns. Social norms have effects on not only people's rational behaviours, but also their irrational behaviours, such as impulse buying based on their normative evaluations of a particular purchase.

This chapter reviewed the literature about impulse buying, social influence and the different types of self-construal. The review offers a detailed insight into the extant knowledge, the gaps and further research opportunities. These insights will also be considered when designing, collecting and analysing the quantitative data. Rook and Fisher (1995) showed that although impulse buying is not a rational behaviour, the normative influence still had an effect on it, which suggested that a comprehensive study is needed on the effect of social influence on impulse buying. Zhang and Shrum (2008) primed participants' activated self-construal successfully in their impulse buying research, and they found that consumers' different types of self-construal may have different effects on their impulse buying behaviour. According to these prior studies, a grouping method based on the priming task can be considered.

This chapter offered an overview of consumers' impulse buying behaviour and the factors that may moderate the relationship between consumers' general impulsiveness and real impulse buying. It also discussed the previous studies' limitations. The research objectives and questions of this PhD thesis will be discussed in the next chapter.

CHAPTER 3 THEORETICAL FRAMEWORKS

3.1 Introduction

To get a clear understanding of the theoretical framework, this chapter will describe the theoretical developments of the three studies in this PhD research. A review of the previous studies related to impulse buying, especially in the field of how social factors can influence this special buying behaviour, will be discussed first in this chapter. After that, the state-of-the-art in impulse buying research will be stated, and the research objectives and research questions will be outlined. The hypotheses and theoretical frameworks for the three studies will finally be presented and explained.

3.2 The state-of-the-art in impulse buying research

Traditional consumer studies have normally linked social norms with “reasoned” or “planned” buying behaviour (Fishbein & Ajzen, 1975) and in some cases norms were found to play an important role in specific contexts, such as societal marketing. Kotler (1972) introduced the concept of societal marketing to illustrate that a company not only needs to consider its consumers’ needs and the company’s requirements, but also has to consider the society’s long-term interests. Social norms usually have been used in social marketing to highlight the benefits of social good for securing and maintaining customer engagement. However, most of the marketing activities that used social norms were related to rational behaviours, such as energy conservation, environmental regulation, recycling, animal

welfare, health, etc.; research has yet to focus on how marketing that includes normative information can influence people's impulse buying behaviours. In practice, some public sector organisations (e.g. the UK Department for International Development, the World Health Organization, PETA, the US Agency for International Development, etc.) use social norms to encourage people to behave in a more socially approved way. Many companies also use social norms as a part of their societal marketing activities (e.g. The Body Shop, Boss, etc.) to influence consumers' buying behaviour (e.g. the International Social Marketing Association, the European Social Marketing Association, and the Australian Association of Social Marketing).

Impulse buying as a kind of irrational buying behaviour which is not included in the traditional planned buying behaviours has not been always linked to social norms because of its impulsive characteristic. However, as Rook and Fisher (1995) indicated, although impulse buying was not a traditional rational behaviour which allowed consumers to have a mature evaluation upon the behaviour under the immediate buying situation, consumers were still feeling, thinking, and evaluating during the temporal delay between a buying impulse and real impulse buying behaviour, even just for a few seconds (Chomvilailuk & Butcher, 2014). Consumers' own evaluations based on social norms could still influence their impulse buying behaviour (Rook & Fisher, 1995; Kropp, et al., 1999; Zhang & Shrum, 2008). The results also indicated that consumers were more likely to display behaviour consistent with their impulsiveness when they thought the buying was favourable (Rook & Fisher, 1995). Rook and Fisher (1995) made a great contribution to consumer behaviour as they demonstrated that, similar to rational buying behaviours, impulse buying could also be influenced by normative information.

However, Rook and Fisher (1995) only studied the normative evaluations at the individual level (consumers' own evaluations about the appropriateness of making an impulsive purchase). In current consumer behaviour literature, there is a dearth of studies about how social evaluations at collective level (norms in a social group) can influence consumers' impulsive buying behaviour (Luo, 2005; Opoku, 2012; Amos, et al., 2014; Badgaiyan & Verma, 2015; Cunha & da Silva, 2015). Thus, the current research can provide some insight into how impulse buying could be influenced by collective social norms information.

Moreover, impulse buying has always been regarded as a negative buying behaviour because of its bad traits and bad outcomes (e.g. financial problems, immature action, lower self-esteem, post-purchase guilt and dissatisfaction, etc.) and most previous studies tried to find a way to help consumers reduce or avoid buying impulsively (Wolman, 1973; Kroeber-Riel, 1980; Rook, 1987; Piron, 1991; Rook & Fisher, 1995; DeSarbo & Edwards, 1996; Beatty & Ferrell, 1998; Madhavaram & Laverie, 2004; Musadik & Azmi, 2017). There were no studies on the potential positive side of impulse buying (e.g., buying a gift for friend's birthday; buying things in charitable activities, etc.).

Furthermore, individuals hold both dependent and inter-dependent self-construal types simultaneously (Singelis, 1994). Whether one particular type of self-construal can influence individuals' behaviours at a particular time depends on whether it has been activated at that time (Trafimow, et al., 1991; Hamilton & Biehal, 2005; Zhang & Shrum, 2008). In Zhang and Shrum (2008), consumers' activated self-construal was manipulated successfully in a priming task. Consumers with different activated self-construal held different attitude toward beer consumption and problem drinking. The research confirmed that different activated self-construal types had different effects on impulse buying, and individuals with

a general long-term independent self-construal could change to dependent self-construal under a particular situation, and vice versa.

To further understand the effect of social influence on consumers' buying behaviour, it is important for researchers to understand which self-construal type the individuals hold in a particular situation, because: (1) there is a dearth of studies about the effect of the collective level social evaluations on impulse buying behaviour; and (2) how different types of activated self-construal can further influence the effect of social norms on people's impulse buying behaviour is blank, so integrating self-construal into the effect of collective-level social norms on impulse buying would make significant advances in this field of enquiry.

Thus, the current research can provide some insights into how impulse buying could be influenced by collective social norms information existing in marketplaces.

3.3 Research objectives

To get a more comprehensive understanding of impulse buying, this PhD research will focus on the new area in the field of enquiry: the effect of collective-level social influence on consumers' impulse buying behaviour, as well as how consumers' activated self-construal can further influence the effect of social norms on consumers' impulse buying behaviours.

The following research objectives were formulated:

RO 1: To investigate whether social norms can moderate consumers' general impulsiveness and their impulse buying behaviour;

RO 2: To understand how different types of social norms can influence consumers' impulse buying differently;

RO 3: To examine how consumers' activated self-construal can further influence the effect of social norms on impulse buying.

3.4 The theoretical framework of study one

Impulse buying has been defined as consumers' tendency to buy unreflectively, spontaneously and immediately (Rook & Fisher, 1995) when an external trigger stimulates the individual to make a purchase (DeSarbo & Edwards, 1996) with no pre-shopping intention (Beatty and Ferrell 1998). The importance of impulse buying in the retailing industry has attracted much research, e.g. DuPont (1948, 1965), Clover (1950), Applebaum (1951), Stern (1962), Wolman (1973), Kroeber-Riel (1980), Rook and Hoch (1985), Rook (1987), O' Guinn and Faber (1989) and Piron (1991).

Consumers' impulsiveness can be used to predict their impulse buying behaviour. There is a relationship between impulsive urge and impulse buying (Piron, 1991; Rook & Fisher, 1995; DeSarbo & Edwards, 1996). Moreover, Rook and Fisher (1995) also found that the strength of the relationship between impulsiveness traits and impulse buying can be moderated by the consumer's own normative evaluation. This can reflect normative evaluation's effect on impulse buying at an individual level. This PhD study aims to further understand the effect of normative evaluation on impulse buying from the collective evaluation level, i.e. the effect of social norms on impulse buying.

According to Bicchieri (2006), social norms are customary rules that provide general guidelines for behaviour in groups and societies. There are no fixed patterns of behaviour within social norms (Berger & Luckmann, 1966; Solomon, et al., 1991). When subjects are properly focused, rules are chosen, and expectations can be complied by others. Social norms can be divided into prescriptive norms and proscriptive norms, depending on the

conditions. Under certain conditions, social norms can be either ‘thou shalt’ (prescriptive norms) or ‘thou shalt not’ (proscriptive norms) (Jasso & Opp, 1997; Cialdini & Trost, 1998).

Although consumers who rank high on their buying impulsiveness may also buy things on impulse more frequently than others, social norms should have a moderating effect on this (Rook & Fisher, 1995; Chomvilailuk & Butcher, 2014). This reflects that the effects of impulsiveness on impulse buying behaviour in a particular situation where normative perspectives on individual behaviour provide guidelines for acceptable conduct (Birenbaum & Sagarin, 1976; Cialdini & Trost, 1998). In other words, people would be more likely to display socially approved behaviour. Therefore, consumers may behave consistent with their general impulsiveness when they have been influenced by prescriptive norms, but they may suppress their buying impulsiveness when they have been influenced by proscriptive norms. Hence the following two hypotheses can be developed for study one:

H1a: When consumers are influenced by prescriptive norms, there is a significant relationship between consumers’ impulsiveness traits and impulsive buying decisions.

H1b: When consumers are influenced by proscriptive norms, there is no relationship between consumers’ impulsiveness traits and impulsive buying decisions.

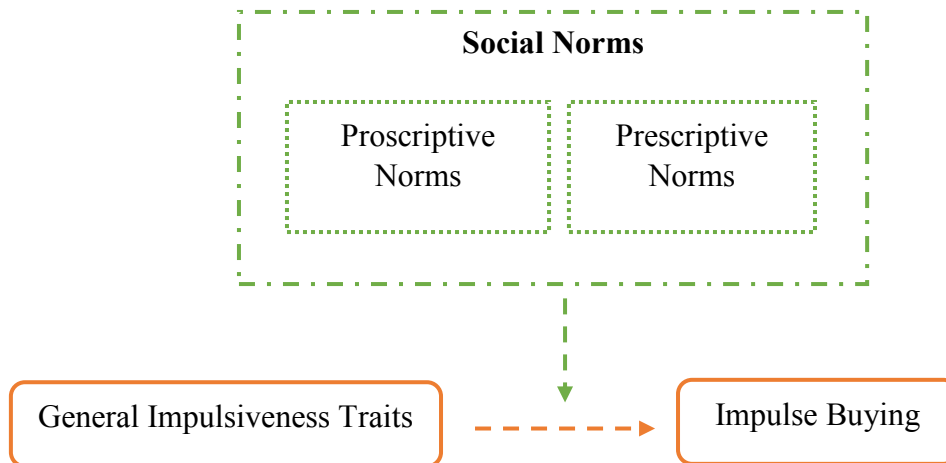


Figure 3.1 Conceptual framework: study one

3.5 The theoretical framework of study two

Because social norms may have more than one meaning in daily language (Shaffer, 1983), except for the classification method based on what kind of information (socially approved or social unapproved) a norm delivers, social norms can also be divided into “what is normally done” (descriptive norms) and “what is normally accepted” (injunctive norms) (Shaffer, 1983; Cialdini, et al., 1990; Cialdini, et al., 1991; Triandis, 1994). Once social norms have been created and activated, they have different impact on human behaviours across different situations (Cialdini & Trost, 1998). Injunctive norms have been identified with a greater extend on the situational boundaries than descriptive norms (Cialdini, et al., 1990), which means injunctive norms may have a greater effect on people’s behaviours across different situations than descriptive norms. Therefore, how (descriptive norms or injunctive norms) to deliver the social norms (prescriptive norms or proscriptive norms) should have different effect on consumers’ impulse buying behaviour. In order to understand how social norms can influence consumers’ impulse buying behaviour more

comprehensively, it is necessary to investigate the effect of social norms on impulse buying across the two classifications.

As indicated in Rook and Fisher (1995), consumers' general impulsiveness traits cannot always indicate consumers' impulse behaviour successfully, and in the structural model of impulse buying developed by Beatty and Ferrell (1998), a strong relation between the impulse buying tendency ($\gamma = .30$ (6.12)), the urge to buy impulsively ($\gamma = .42$ (8.51)), and impulse buying was found. Luo (2005) studied the influence of peer presence on impulse buying and found a high correlation (Pearson's correlation = 0.67) between immediate impulsive urge and impulse buying, which supported the precursor model of impulse buying (Opoku, 2012). Therefore, study two of this PhD thesis uses consumers' immediate impulse urge under a buying situation instead the consumers' general impulsiveness traits as an indicator of current impulse buying behaviour. This is in line with Luo (2005).

Study two further investigates the effect of the different types of social norms on consumers' impulse buying behaviours. The way in which (descriptive norms or injunctive norms) different kinds of social norms are delivered (prescriptive norms or proscriptive norms) will further influence the effect of social norms on consumers' impulse buying behaviours. Hence the following two hypotheses are developed for study two:

H2a: The prescriptive norms will increase consumers' impulsive urge and the possibility of impulse buying, and this increase will be greater when the group in question is influenced by injunctive norms rather than by descriptive norms.

H2b: The proscriptive norms will decrease consumers' impulsive urge and buying decisions' impulsive level, and this decrease effect will be greater when the group in question is influenced by injunctive norms rather than by descriptive norms.

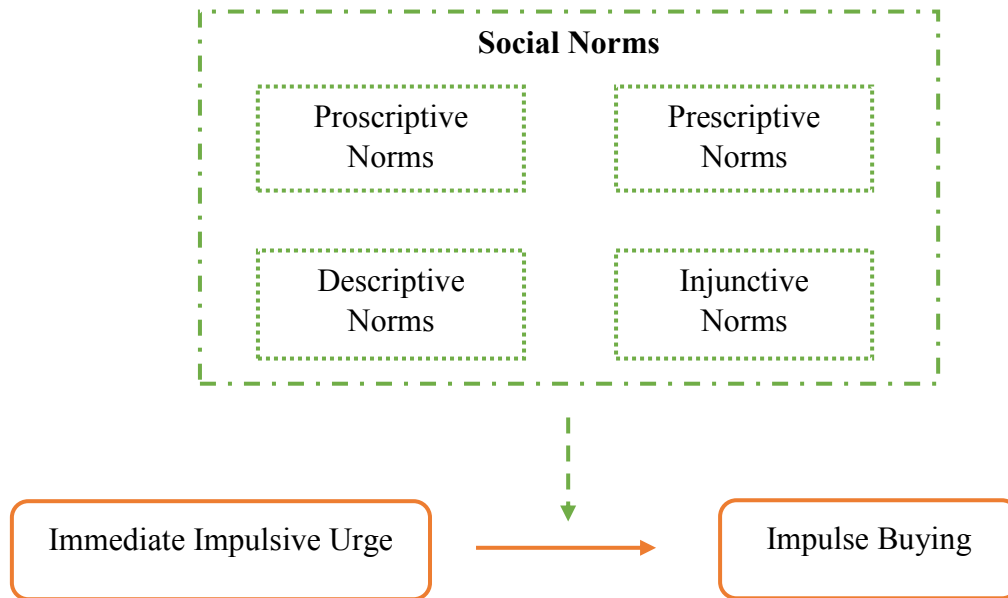


Figure 3.2 Conceptual framework: study two

3.6 The theoretical framework of study three

The effect of social norms on consumers' impulse buying varies depending on different types of social norms, and that effect may also be different depending on consumers' personal differences, such as the consumer's activated self-construal in a particular buying situation.

Self-construal means the way that people perceive themselves as linked or not linked to other members in the society (Markus & Kitayama, 1991; Zhang & Shrum, 2008). People with independent self-construal consider themselves independent, separated from the group, and are likely to rate a high value for individual achievement and uniqueness (Singelis, 1994). While people with dependent self-construal view themselves as a part of the big group, and value highly conformity, harmony with the group, as well as safety (Singelis, 1994). Independents are more willing to take social risk (Mandel, 2003) and are always driven by

their attitude than the subject norms than dependents (Ybarra & Trafimow, 1998). Therefore, theoretically self-construal can be a “mediator” between social norms and behaviour.

Therefore, in study three the following hypotheses are developed:

H3a: The prescriptive norms would have an increased effect on consumers’ impulsive urge and buying decisions, and this effect would be greater when the social norms are delivered in the form of injunctive norms rather than descriptive norms, and the effect would be greater for consumers with a dependent self-construal rather than independents.

H3b: The proscriptive norms’ decreased effect on consumers’ impulsive urge and buying decisions would be greater when the social norms are delivered in the form of injunctive norms rather than descriptive norms, and the effect would also be greater to the consumers with dependent self-construal rather than independents.

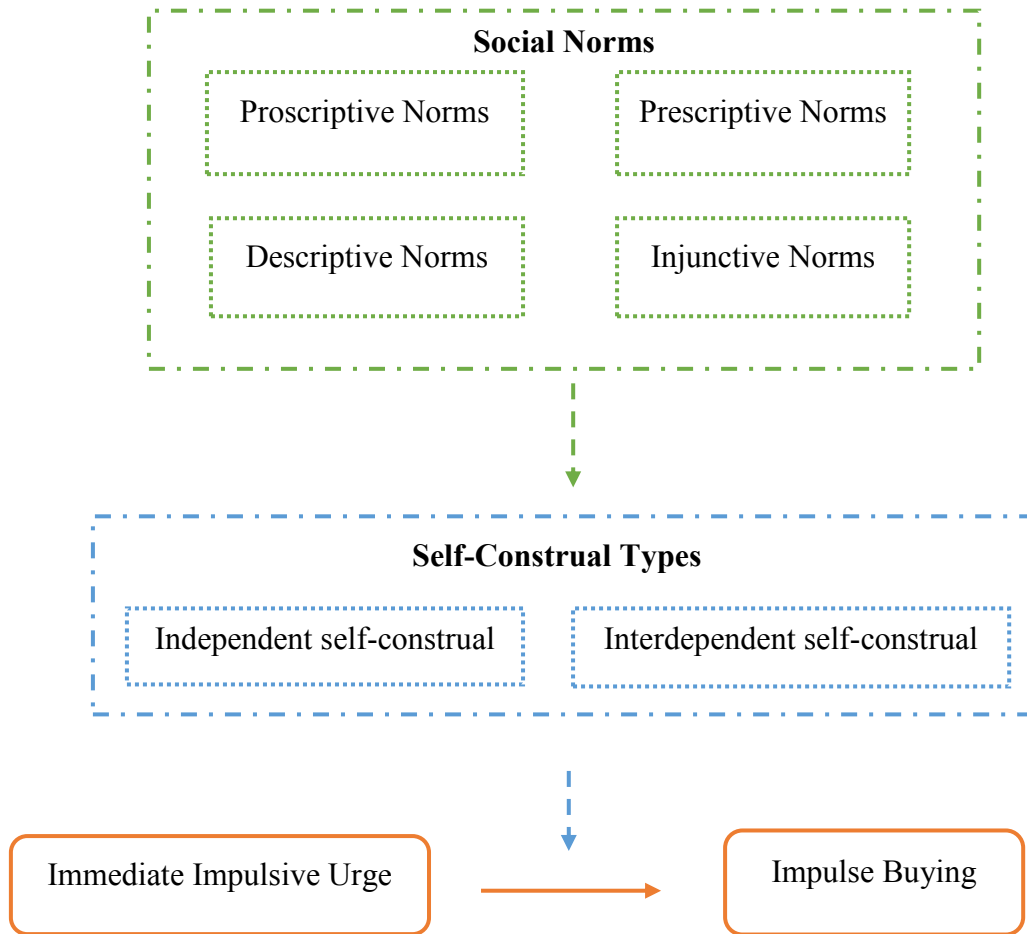


Figure 3.3 Conceptual framework: study three

3.7 Conclusion

This chapter reviewed the theoretical framework and stated the theoretical development of the three studies. After reviewing the previous studies related to impulse buying, especially related to how social factors can influence this special buying behaviour, the state-of-the-art in the current impulse buying research was discussed. There a need to study the relationship between consumers' general impulsiveness and their impulse buying behaviour at collective level, i.e. the effects of social norms on impulse buying. Moreover, how consumers activated self-construal under the immediate buying situation can further influence the effect of social norms on consumers' impulse buying is still blank. Thus the research objectives of the PhD

thesis were developed. Finally, the research hypotheses and theoretical frameworks for studies one, two and three were developed.

CHAPTER 4 METHODOLOGY

4.1 Introduction

This chapter aims to give an overview of the methodology used in the three studies conducted for this research, starting by presenting the philosophy of the current research (Section 4.2). Section 4.3 details the methodology for the research, such as the experiment procedures, the development of the scenarios, and the selected representative social norms, etc. The data analysis methods, which are introduced in Section 4.4, include both parametric methods and nonparametric methods. This chapter concludes with a summary (Section 4.5).

The literature review presented in Chapter 2 revealed that normative influences not only affect consumers' rational buying behaviour, but also have an effect on their particular buying behaviour – impulse buying. It became evident that there is an opportunity for an exploratory study into how different social norms might influence consumers' impulsive buying behaviours, and how different types of self-construal can further influence the effect of social norms on consumers' impulse buying behaviours. In order to better understand the methodology, an analysis of the research philosophy is first explored.

4.2 The research onion

The research onion developed by Saunders et al. (2009) focuses on the main philosophical and methodological considerations that can guide researchers to answer their research questions effectively. The research onion includes all of the main elements that a rigorous research project should consider, especially in the areas of business and management.

As depicted in Figure 4.1, the research onion's two outer layers (philosophy and approach to theory development) cover the philosophical considerations of the research, while the four inner layers (methodological choice, strategy, time horizon, techniques and procedures) show the practical considerations. Developing and justifying the methodological issues for the current research, based on Saunders et al. (2009), the research onion can help to yield appropriate answers to the research questions (Saunders, et al., 2009). A better understanding of the research philosophy directs the following practical considerations (Saunders, et al., 2009), before moving on to the discussion concerning the philosophical considerations.

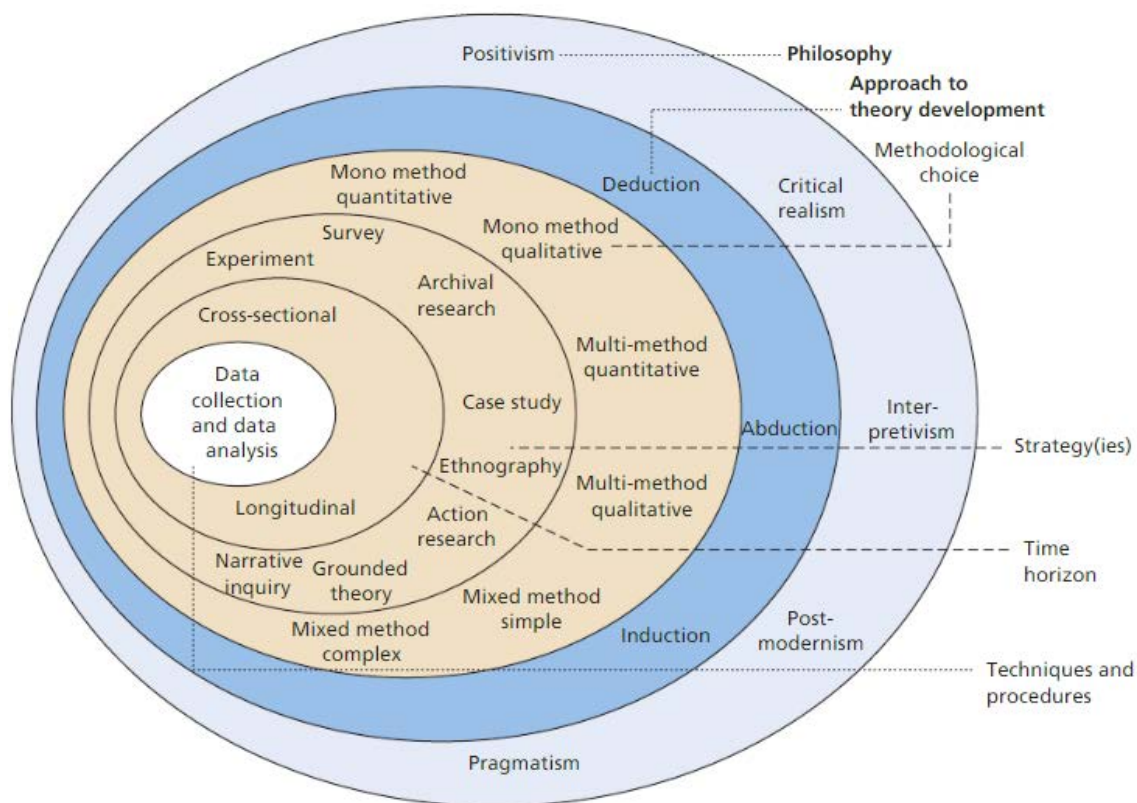


Figure 4.1 The research 'onion'
(Source: Saunders et al., 2015, p. 124)

4.2.1 Approaches to research philosophy

The research philosophy is related to a system of assumptions and beliefs about how the knowledge has developed, describing precisely what is being done when embarking on any research: that is, developing knowledge in a specific area. The knowledge that has been developed may not be a new theory concerning the motivation of human behaviour, but even attempting to respond to a particular question in a specific area leads to the development of new knowledge (Saunders, et al., 2009).

During the knowledge development process, the researcher needs to make a number of assumptions, regardless of whether the researcher is aware of them or not (Burrell & Morgan, 1979). These assumptions relate to human knowledge (epistemological assumptions), to the realities that will be faced in the research (ontological assumptions), and the effect of the researcher's own values on the research process (axiological assumptions) (Bryman, 2001; Saunders, et al., 2009). These assumptions can shape the researcher's understanding of the research questions, and can then further influence the selection of methods and the interpretation of the findings (Crotty, 1998). A well thought out and consistent set of assumptions will make up a credible research philosophy, which will underpin the methodology of research design, data collection techniques and the selection of analysis methods; a good research philosophy can fit all these research elements together (Saunders, et al., 2009).

In this regard, many scholars (e.g., Creswell, 2003; Saunders et al., 2009; Bryman & Bell, 2015) summarized five philosophical considerations that are used most commonly in business and management research: positivism, realism, interpretivism, postmodernism, and pragmatism. These research philosophies are shown in the research onion's first layer

(Figure 4.1), indicating the research philosophy's fundamental role in the design of the research methodology, and this also shows that selecting an appropriate research philosophy when performing research is the basis of developing suitable research methods.

Because these major research philosophies are developed based on the concept of the research paradigms of epistemology, ontology and axiology, so the research philosophies are usually addressed and compared in terms of epistemological, ontological and axiological stances (Saunders, et al., 2009). Subsequently, each of the research paradigms has a different effect on how the researcher thinks about the research process (Bryman & Bell, 2015). A summary of the different influences on the five major research philosophies in terms of their epistemology, ontology, axiology and typical methods can be found below in Table 4.1.

Table 4.1 A comparison of five research philosophies in business and management research

| <i>Ontology (nature of reality or being)</i> | <i>Epistemology (what constitutes acceptable knowledge)</i> | <i>Axiology (role of values)</i> | <i>Typical methods</i> |
|---|---|--|--|
| Positivism | | | |
| Real, external, independent | <i>Scientific method</i> | <i>Value-free research</i> | <i>Typically deductive, highly structured, large samples, measurement, typically quantitative methods of analysis, but a range of data can be analysed</i> |
| One true reality (universalism) | <i>Observable and measurable facts</i> | <i>Researcher is detached, neutral and independent of what is researched</i> | |
| Granular (things) | <i>Law-like generalisations</i> | | |
| Ordered | <i>Numbers</i> | <i>Researcher maintains objective stance</i> | |
| | <i>Causal explanation and prediction as contribution</i> | | |
| Critical realism | | | |
| Stratified/layered (the empirical, the actual and the real) | <i>Epistemological relativism</i> | <i>Value-laden research</i> | <i>Retroductive, in-depth historically situated analysis of pre-existing structures and emerging agency. Range of methods and data types to fit subject matter</i> |
| External, independent | <i>Knowledge historically situated and transient</i> | <i>Researcher acknowledges bias by world views, cultural experience and upbringing</i> | |
| Intransient | <i>Facts are social constructions</i> | | |
| Objective structures | <i>Historical causal explanation as contribution</i> | <i>Researcher tries to minimise bias and errors</i> | |
| Causal mechanisms | | <i>Researcher is as objective as possible</i> | |
| Interpretivism | | | |
| Complex, rich | <i>Theories and concepts too simplistic</i> | <i>Value-bound research</i> | <i>Typically inductive. Small samples, in-depth investigations, qualitative methods of analysis, but a range of data can be interpreted</i> |
| Socially constructed through culture and language | <i>Focus on narratives, stories, perceptions and interpretations</i> | <i>Researchers are part of what is researched, subjective</i> | |
| Multiple meanings, interpretations, realities | <i>New understandings and worldviews as contribution</i> | <i>Researcher interpretations key to contribution</i> | |
| Flux of processes, experiences, practices | | <i>Researcher reflexive</i> | |
| Postmodernism | | | |
| Nominal | <i>What counts as 'truth' and 'knowledge' is decided by dominant ideologies</i> | <i>Value-constituted research</i> | <i>Typically deconstructive – reading texts and realities against themselves</i> |
| Complex, rich | | <i>Researcher and research embedded in power relations</i> | |
| Socially constructed through power relations | <i>Focus on absences, silences and oppressed/repressed meanings, interpretations and voices</i> | <i>Some research narratives are repressed and silenced at the expense of others</i> | <i>In-depth investigations of anomalies, silences and absences</i> |
| Some meanings, interpretations, realities are dominated and silenced by others | <i>Exposure of power relations and challenge of dominant views as contribution</i> | | |

| <i>Flux of processes, experiences, practices</i> | | <i>Researcher radically reflexive</i> | <i>Range of data types, typically qualitative methods of analysis</i> |
|---|--|--|--|
| Pragmatism | | | |
| Complex, rich, external | <i>Practical meaning of knowledge in specific contexts</i> | <i>Value-driven research</i> | <i>Following research problem and research question</i> |
| ‘Reality’ is the practical consequences of ideas | <i>‘True’ theories and knowledge are those that enable successful action</i> | <i>Research initiated and sustained by researcher’s doubts and beliefs</i> | <i>Range of methods: mixed, multiple, qualitative, quantitative, action research</i> |
| Flux of processes, experiences and practices | <i>Focus on problems, practices and relevance</i> | <i>Researcher reflexive</i> | <i>Emphasis on practical solutions and outcomes</i> |
| | <i>Problem solving and informed future practice as contribution</i> | | |

(Source: Saunders et al., 2009, pp. 136-137)

According to Saunders et al. (2009), each of these research philosophies has its own advantages and is better at doing different things, so we cannot say which one of them is the best or strongest, and it is inappropriate to say one particular research philosophy is better than any other. Saunders et al. (2009) further declared that researchers can choose an appropriate research philosophy depending on the research question(s).

As shown in Table 4.1, a research philosophy is determined by the interrelationship between epistemology (what constitutes acceptable knowledge), ontology (what is the nature of reality or being), and axiology (what is the role of values) (Doyal, 1993; Saunders, et al., 2009). This summary provides guidelines for the present research to adopt an appropriate research philosophy to carry out the research objectives effectively. The next section will move to the discussion of the selected philosophy for the current research.

4.2.2 Research philosophy of the current research

Positivism and interpretivism are the two basic research philosophies that have been used in broad social science (Antwi & Kasim, 2015). Positivism philosophy usually guides scientific quantitative methods, while interpretivism favors humanistic qualitative methods. Table 4.2 summarizes the main differences between these two research philosophies.

Table 4.2 The comparison between positivism and interpretivism

| Assumptions | positivism | interpretivism |
|---------------------------------|---|---|
| Focus of interest | <i>“What is general, average and representative”</i> | <i>“What is specific, unique and deviant”</i> |
| Knowledge generated | Absolute Laws (time, context and value free) | Relative meanings (time, context, culture, value bound) |
| Subject/Researcher relationship | <i>“Rigid separation”</i> | <i>“Interactive, cooperative, participative”</i> |
| Nature of reality | <i>“Objective, tangible, single”</i> | <i>“Socially constructed, multiple”</i> |
| Goal of research | <i>“Explanation, strong prediction”</i> | <i>“Understanding, weak prediction”</i> |
| Desired information | <i>“How people think and do a specific thing, or have a specific problem”</i> | <i>“What some people think and do, what kind of problems they are confronted with, and how they deal with them”</i> |

(Source: Pizam & Mansfeld, 2009, p. 1)

After considering the position of different philosophies in terms of epistemology (what constitutes acceptable knowledge), ontology (the nature of reality or being), and axiology (the role of values), the positivist philosophy has been chosen as an appropriate research philosophy for the current research dependent on the current research objectives, which are:

RO 1: To investigate whether social norms can moderate consumers' general impulsiveness and their impulse buying behaviour;

RO 2: To understand how different types of social norms can influence consumers' impulse buying differently;

RO 3: To examine how consumers' activated self-construal can further influence the effect of social norms on impulse buying.

For the importance of the role of positivism in a research study, Hirschheim (1985) stated that *"positivism has a long and rich historical tradition. It is so embedded in our society that knowledge claims not grounded in positivist thought are simply dismissed as scientific and therefore invalid"* (p. 33). Positivists believe that reality can be observed and described from a neutral and objective viewpoint, and the phenomena should be repeatable and isolated (Levin, 1988). This often involves the manipulation of reality with variations depending on a single independent variable, then forming relationships between the basic elements in the social world, and then predictions can be raised based on the previous observations and investigated realities (Kivunja & Kuyini, 2017). Moreover, Alavi & Carlson's (1992) findings from the review of 902 IS (information system) research articles further supported Hirschheim's (1985) view. They found that all empirical research used positivism as the research philosophy.

Positivist philosophy has been chosen because the research knowledge concerning social norms can be learned and observed in the natural world; the researcher considers the real data as the required resource and attempts to deal with the collection and analysis of the "fact" (Saunders, et al., 2009). Additionally, the theoretical frameworks that have been presented in Chapter 3 show that the current research aims to link the research framework and hypotheses to theories. This follows the principles of the positivist philosophy, which

are that the positivist paradigm cannot only be used to seek theory development by establishing interconnection, but also uses empirical analysis for theory testing (Saunders, et al., 2009). Moreover, under the guidance of positivism, the researcher must set aside his or her personal values when studying a particular social phenomenon, which minimizes the potential bias that might be caused by the researcher's personal values, such as their personality. Hence, with this set of considerations, I believe that a positivist stance is appropriate for the current research, as it facilitates the development of the framework with the theory-testing requirement, which is germane to the research's objectives.

4.2.3 Research approach

The second layer of the research 'onion' shows the research approaches (Figure 4.1) that can guide research design; it includes three of the most commonly used research approaches in business and management subjects: deductive, inductive and abductive (Saunders, et al., 2009). A summary of the key research process of the research approaches is presented in Figure 4.2.

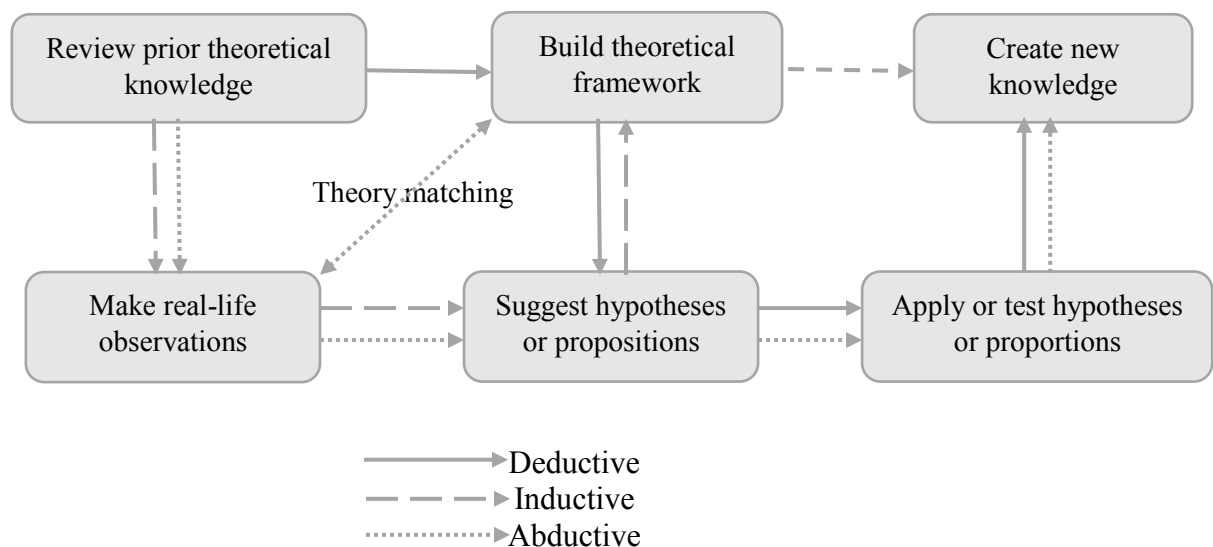


Figure 4.2 Main research process of the research approaches
(Source: Spens & Kovacs, 2006)

As showed in the table above, a deductive approach is commonly used for research that aims to perform the theory testing based on the hypotheses that are generated from the existing theories, which follow the positivist paradigm; whilst an inductive approach usually aims to develop a theoretical framework or theory depending on previous empirical observations, which is following the interpretivist paradigm (Bryman, 2001; Saunders, et al., 2009). The abductive approach is a combination of both the deductive and the inductive approach, which begins with real life observations and/or theoretical knowledge (Saunders, et al., 2009).

After discussing the main features of the three research approaches, the appropriate approach for this current research can be selected. The deductive approach, which develops a logical understanding of a particular issue based on theory (DePoy & Gitlin, 2016), is consistent with what was presented in Chapter 3. Therefore the deductive approach has been chosen as the appropriate approach for the current research. The deductive approach has been adopted by most studies in business and management, using quantitative techniques, for theory-testing purposes (Rook & Fisher, 1995; Luo, 2005; Zhang & Shrum, 2008; Chicksand, et al., 2012). The processes of deduction are shown in Figure 4.3.

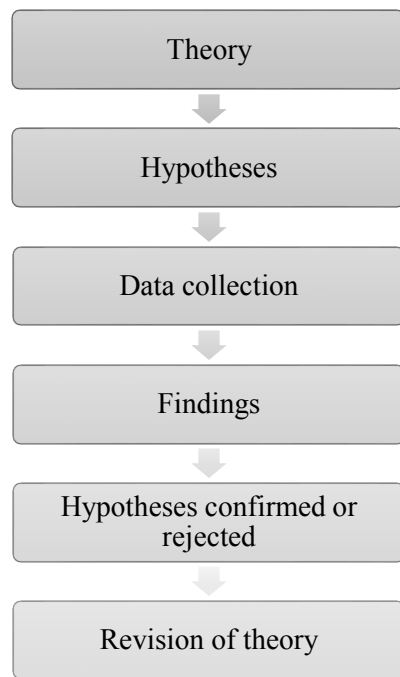


Figure 4.3 The process of deduction

(Source: Bryman and Bell, 2015, p. 23)

The literature review and theoretical framework that have been presented in Chapter 2 and Chapter 3 precisely followed the process of deduction. In line with the deductive approach, a logical understanding of consumers' impulse buying behaviour was gathered, starting with a literature review in this area about the practices and performance from current theories. The specific hypotheses were then proposed after reviewing the relevant theoretical settings in the extant literature. Consequently, these hypotheses will be tested in an experimental setting, based on the relationships that have been presented in the theoretical frameworks. Furthermore, as pointed out by Chalmers, (1999), hypotheses can be confirmed by empirical testing, but sometimes the hypothesis might be rejected, and hypothesis rejection can lead to a new research direction and might result in a revision of the theory. In light of this, through the empirical tests for the proposed theoretical frameworks that have been presented in Chapter 3, the results will not only refine the existing theoretical thinking on the subject of consumer behaviour, but will also provide potential opportunities for future research.

Additionally, from the philosophical perspective, the 'logic' process, which has been used in the deductive approach, is consistent with the positivist paradigm (Saunders, et al., 2009). The research questions are raised from reality, and the research aims to draw a causal explanation and prediction by using quantitative methods of analysis. This indicates a consistency between the selected research philosophy and the research approach, reflecting the rigorous philosophical considerations for the current research. Hence, the deductive approach has been employed for the current research, following the adoption of the positivist paradigm.

4.2.3 Research strategy

Now I move to another inner layer in the research 'onion' (Figure 4.1) called research strategy which covers the practical considerations of any research. Research strategy plays an important role in research design, because it has a fundamental role in all social research, and makes it possible to turn a research question into a research project (Saunders, et al., 2009). Many leading scholars in the social sciences point out seven major research strategies that are widely used: experiment, surveys, case studies, action research, grounded theory, ethnography and archival research (Burrell & Morgan, 1979; Gummesson, 1999; Bryman, 2001; Saunders, et al., 2009; Bryman & Bell, 2015). Additionally, Galliers (1991) indicated that some research approaches typically conform to the positivist paradigm (e.g., experimental, surveys, etc.) and some are consistent with interpretivist paradigm (e.g., action research, grounded theory, etc.). Researchers can select the appropriate research strategy according to the research questions and purpose, e.g. explanatory, exploratory or descriptive (Yin, 2003).

Before introducing the research approach used here, the key features of the seven major research strategies are summarized in Figure 4.4.

| Inductive | Deductive | Mixed |
|---|--|---|
| <ul style="list-style-type: none"> • Action Research (Theme based interpretation, emphasizing the purpose involving the practitioners, explains the process of diagnosing and establishing of future implications) • Archival Research (Make use of administrative records and documents as the principal source of data) • Ethnography (Describes and explains the social world, the research subjects inhabit in the way in which they would describe and explain it) | <ul style="list-style-type: none"> • Experiment (Through exploratory and explanatory methods, it aims to answer 'how' and 'why') • Survey (Commonly used in business and management research and answers 'who', 'where', 'what', 'how much', 'how many') | <ul style="list-style-type: none"> • Case Study (Involves empirical investigation of contemporary phenomenon through multiple sources) • Grounded Theory (Theory building through a combination of induction and deduction) |

Figure 4.4 A summary of the seven research strategies' key features
(Source: Benbasat, et al., 1987; Galliers, 1991; Saunders, et al., 2009)

According to the theoretical frameworks and research questions of the current research which have been presented in Chapter 3 (e.g., whether social norms can influence consumers' general impulsiveness and their impulse buying behaviour; how different types of social norms can influence consumers' impulse buying differently; how consumers' activated self-construal can further influence the effect of social norms on impulse buying), experiment has been chosen as the approach of the current research. Adopting experimental design in the current study can help with the investigation into how social norms influence consumers'

impulsive buying behaviors, and can also test the hypotheses that have been established from the existing theories.

Furthermore, from the philosophical perspective, an experimental strategy is consistent with a positivism paradigm and deductive approach, which aims to identify the precise relationship between different variables using quantitative analytical techniques, then make generalizable statements for the hypotheses, which are applicable to real-life situations (Galliers, 1991).

In the following sections, I justify the choice of methodology and explain how they both operate and interoperate in the present research.

4.3 Experimental design

Experimental research is one of the most rigorous research designs, widely used in social science (Bhattacharjee, 2012), and is best suited for explanatory research with the goal of examining cause-effect relationships (Webster & Sell, 2014). Experimental research can be divided into two broad categories: true experimental designs and quasi-experimental designs. The true experimental designs can argue a proven cause-and-relationship effectively. By their nature, true experimental designs are not appropriate when the research questions are still broad in nature as this kind of design is usually tightly focused, and each study can only investigate one specific research question (Thompson & Panacek, 2006). The another type of experimental research, quasi-experimental designs, can help to establish potential associations or validate the methods of experimental treatment; but quasi-experimental designs rarely have randomization compared with true experimental designs, so there is an increased potential for bias and as a result the validity of the research is compromised

(Thompson & Panacek, 2006). As such, these designs can be used to establish the rationale for the following specific, mature, focused, true experimental designs.

Experimental research can be conducted in either laboratory or field settings. Field experiments are relatively rare because of the difficulties in manipulating the treatments and controlling the extraneous effect in the field setting, although field experiments are both high in internal and external validity (Bhattacharjee, 2012). Laboratory experiments conducted in laboratory settings tend to have a high internal validity, but come with low external validity associated with generalization because the laboratory setting in a research study may not reflect the real world (Bhattacharjee, 2012).

According to the research questions of the present research which aim to investigate the effect of social norms on the impulsiveness-behaviour relationship, true experimental designs conducted in laboratory settings are chosen to examine these specific research questions respectively.

4.3.1 Laboratory experiments

Laboratory experiments have been defined by Festinger (1971) as a method by which *‘the investigator creates a situation with the exact conditions he [or she] wants to have and in which he [or she] controls some, and manipulates other, variables’* (p. 9). Cook and Campbell (1976) also indicated some key characteristics of laboratory experiments, such as that they can form comparable groups; the subjects in different groups can be influenced by various types of manipulation; and other variables can be well controlled, etc.

Laboratory experiments have been considered to be a valid and appropriate method for various studies in the social sciences; for example, laboratory experiment design has been

widely used as a methodology in many research studies dedicated to various aspects of consumers' buying behaviours (Rook & Fisher, 1995; Luo, 2005; Zhang & Shrum, 2008). One of the most cited advantages of laboratory experiments is their ability to create an artificial environment, which means the researcher can control different variables in at least two random groups (one control group and one experimental group) by assigning them into different experimental groups randomly; this then allows the researcher to test for cause-and-effect relationships accurately (Saxe & Fine, 1982; Jones, 1985; Smith, 2000). In other words, employing the laboratory experimental method can generate the least ambiguous data and dispel the greatest number of alternative explanations (Campbell, 1957; Cook & Campbell, 1976). Other advantages of laboratory experiments are that the subjects can be randomly assigned into groups, giving a high quality of manipulation and control over the variables (Greenberg & Tomlinson, 2004). These characteristics considerably increase the experiments' internal validity (Brewer, 2000).

In the meantime, there have also been some limitations associated with such experiments, such as artificiality. The artificiality of setting may produce unnatural behaviour, then the results may not reflect real life (Martin & Sell, 1979). In other words, the research findings may not be able to be generalized to a real life setting (Hoffman, et al., 1993). However, Berkowitz & Donnerstein (1982) argue that it is not an issue when the study's aim is theory testing, or investigating the kinds of condition that lead to certain types of behaviour (Carlsmith, et al., 1976).

For the present research, because the impulsiveness-behaviour relationship has already been well established in many previous studies (Hoch & Loewenstein, 1991; Rook & Fisher, 1995; Weun, et al., 1998; Hausman, 2000; Verplanken & Herabadi, 2001), and according to the research questions that aim to investigate consumers' impulsiveness traits or impulsive urges

under a particular buying situation in relation to the likelihood of them making impulsive buying decisions rather than an actual buying behaviour, then laboratory experiments are chosen for the present research. Although laboratory has some limitations such as the results may not reflect real life (Martin & Sell, 1979) and the research findings may not be possible to generalize to a real life setting (Hoffman, et al., 1993), but according to the nature of the present research, which is theory testing, those limitations would not influence the results much. The laboratory experimental design of the present research helped the researcher to create artificial experimental situations which allowed accurate results for the impulse-and-buying relationships to be obtained through experiments by controlling different variables and dividing the participants into random groups. Also, because the laboratory experiments in the present research created artificial experimental situations, the researcher got the least ambiguous data as the greatest number of alternative explanations were dispelled by this experimental design. What is more, because the participants were assigned randomly in the experiments, then the researcher could manipulate and control the variables in a high quality. In summary, choosing experimental design for the present research can increase the internal validity of the experiments by analysing the least ambiguous data collected in the artificial settings. Thus, the use of experiments is suitable for this research.

4.3.2 Control group

When preparing for experiments, the idea of control groups has been considered. The control group provides the baseline data for the experimenter which can be used to compare the results under treatment conditions (List, et al., 2011). In other words, the data from a control group informs the experimenter as to what the outcome should be like when the experimental factors are not implemented. Comparing the data from a control group and an experimental

group can enable an unequivocal assessment for the presence or absence of the factors in the experiment if the data differ from each other (Wittes, 2002).

Because control groups provide information about what the outcome would be without the experimental factors being instituted, then without a control group, the impact of the experimental factors can suffer (Saxe & Fine, 1982). For example, the juvenile diversion programme might be assumed to be ineffective if there is no control group because there is no reduction found from the results, and using only those results might suggest terminating the programme. However, the inclusion of a control group permitted the determination that although the treatment did not reduce court appearances, it did prevent a worsening of deviant behaviour (Henggeler & Schoenwald, 2011). Without the control group's data, this extract insight could not have been drawn from the study (Huizinga, et al., 2004).

For the current research, a control group was recruited, making it possible to gather information about what the experimental group's outcome might be when the treatment has not been instituted. Moreover, the control group provides a context without any social norms treatment for the present research as no social norms information was provided for the control group's participants in studies one and two; the control group's experimental results then provided a baseline for other experimental groups about the consumers' impulsive buying when they were not influenced by social norms. In summary, including a control group in the current research makes the results in the experimental conditions comparable.

4.3.3 Development of experimental scenarios

The scenarios that have been used in the current research were adapted from the original scenario that was used by Rook and Fisher (1995). The original imaginary situation was described to the respondents in their research: "*Mary is a 21-year-old college student with*

a part-time job. It is two days before Mary gets her next paycheck and she has only \$25 left for necessities. In addition to food, Mary needs to buy a pair of warm socks for an outdoor party this weekend. After work, she goes with her friend Susan to the mall to purchase the socks. As they are walking through Bullock's, Mary sees a great looking sweater on sale for \$75."(p. 308).

Notten (2006) indicated that the content of an original scenario should be adapted based on the nature of the current research, the current context, and the current groups' culture, etc. to fit the present research. Then, because the original scenario that is mentioned above has been developed and used in an American context, to make sure the current UK-based respondents can better put themselves into the imaginary situation, some adaptations have been made: the term "college student" has been changed to "university student"; the currency has been changed from US Dollars (\$) to pounds Sterling (£); the shopping mall's name has been changed from *Bullock's* to *Selfridges*. Therefore, the scenario after adaptation is: *"Mary is a 21-year-old university student with a part-time job. It is two days before Mary gets her next paycheck and she has only £25 left for necessities. In addition to food, Mary needs to buy a pair of warm socks for an outdoor party this weekend. After work, she goes with her friend Susan to the mall to purchase the socks. As they are walking through Selfridges, Mary sees a great looking sweater which is on sale for £75."*

The adapted scenario was shown to the respondents in the control group in the current research. Another four scenarios that delivered different social norms information have been further developed based on the adapted scenario, and those four scenarios that manipulated prescriptive/proscriptive norms and descriptive/injunctive norms variables were shown to the respondents in the different experimental groups. The manipulated variables in the experimental scenarios are summarized in Table 4.3 below.

Table 4.3 The manipulated variables and variation in the experimental scenarios

| | Descriptive norms | Injunctive norms |
|---------------------------|--|--|
| Proscriptive norms | “The sweater has a sticker on which says ‘Our nation-wide Animal Welfare Protection Charity is trying to defend animal welfare and to decrease animal slaughter by encouraging a boycott of real fur products. You are welcome to join us.’” | “The sweater has a sticker on which says ‘It is our duty to protect animals’ welfare and to keep an ecological balance. Boycott fur! It is our duty to protect animals.’” |
| Prescriptive norms | “The sweater has a sticker on which says ‘We believe every little helps and giving to people in need would make our world better. We will donate £5 to the People’s Welfare Protection Charity with every sweater purchase.’” | “The sweater has a sticker on which says ‘Every one of us should make an effort to help people in need! When you buy this sweater, we will donate £5 to the People’s Welfare Protection Charity.’” |

Depending on the theoretical framework of the current research (see details in Chapter 3), for the four experimental groups, a sticker placed on the sweater that contained different social norms information in an expressly different manner was added at the end of each adapted scenario. The sticker contained the normative information from proscriptive × descriptive norms, proscriptive × injunctive norms, prescriptive × descriptive norms and prescriptive * injunctive norms, respectively.

The scenario used in the proscriptive × descriptive norms experimental group is described as: *“Mary is a 21-year-old university student with a part-time job. It is two days before Mary gets her next paycheck and she has only £25 left for necessities. In addition to food, Mary needs to buy a pair of warm socks for an outdoor party this weekend. After work, she goes with her friend Susan to the mall to purchase the socks. As they are walking through*

Selfridges, Mary sees a great looking sweater with fur, which is on sale for £75. The sweater has a sticker on which says 'Our nation-wide Animal Welfare Protection Charity is trying to defend animal welfare and to decrease animal slaughter by encouraging a boycott of real fur products. You are welcome to join us.'"

The scenario used in the proscriptive × injunctive norms experimental group is described as:

"Mary is a 21-year-old university student with a part-time job. It is two days before Mary gets her next paycheck and she has only £25 left for necessities. In addition to food, Mary needs to buy a pair of warm socks for an outdoor party this weekend. After work, she goes with her friend Susan to the mall to purchase the socks. As they are walking through Selfridges, Mary sees a great looking sweater with fur, which is on sale for £75. The sweater has a sticker on which says 'It is our duty to protect animals' welfare and to keep an ecological balance. Boycott fur! It is our duty to protect animals.'"

The scenario used in the prescriptive × descriptive norms experimental group is described

as: *"Mary is a 21-year-old university student with a part-time job. It is two days before Mary gets her next paycheck and she has only £25 left for necessities. In addition to food, Mary needs to buy a pair of warm socks for an outdoor party this weekend. After work, she goes with her friend Susan to the mall to purchase the socks. As they are walking through Selfridges, Mary sees a great looking sweater, which is on sale for £75. The sweater has a sticker on which says 'We believe every little helps and giving to people in need would make our world better. We will donate £5 to the People's Welfare Protection Charity with every sweater purchase.'"*

The scenario used in the prescriptive × injunctive norms experimental group is described as:

"Mary is a 21-year-old university student with a part-time job. It is two days before Mary gets her next paycheck and she has only £25 left for necessities. In addition to food, Mary

needs to buy a pair of warm socks for an outdoor party this weekend. After work, she goes with her friend Susan to the mall to purchase the socks. As they are walking through Selfridges, Mary sees a great looking sweater, which is on sale for £75. The sweater has a sticker on which says 'Every one of us should make an effort to help people in need! When you buy this sweater, we will donate £5 to the People's Welfare Protection Charity.'"

In study one, the adapted scenario has been used in the control group, the first two scenarios have been used in the proscriptive group, and the last two scenarios have been used in the prescriptive group. In study two, the five scenarios have been used in the control group and the four experimental groups, respectively. In study three, the four experimental scenarios have been distributed to dependent participants and independent participants separately after they complete the self-construal priming task (see details in Section 4.3.12).

4.3.4 The selected representative social norms

Animal protection

Ethical consumption has attracted increasing attention from researchers in recent years: people are buying and using products according not only to their personal preference, but also based on ideas of what is good vs. bad, and what is right vs. wrong, in a moral sense (Starr, 2009). Ethical consumption is related to many areas of concern. Briefly, the key issues are buying foods that have been produced in an environmentally sustainable way, favouring products with low carbon emissions, boycotting companies with low consideration of animal welfare, etc. (Starr, 2009). The data suggest that large quantities of ethical goods and services have been sold in the UK, for example; more and more consumers purchased ethically-produced products in the UK from 1999, with registered growth rates of 30%-200% per year (Co-operative Bank, 2007); and the value of ethical spending in the

UK grew by 3.2% to 81.3 billion in 2017 (Ethical Consumer Research Association, 2017). Some social groups contribute to the promotion of pro-social acceptance of using animal products; for example, the People for the Ethical Treatment of Animals (PETA) discourage the use of animal fur and alligator products (Williams, 2000; Summers, et al., 2006). For this research, I am looking at protecting animals by non-consumption of fur products and this has been selected as the representative factor for the collective proscriptive norms in the experiment.

Helping others

The notion of helping others was proposed by Berkowitz and his associates (Berkowitz & Daniels, 1963; Berkowitz, 1971) as a norm of social responsibility, and it prescribes that people should help others in need. Social responsibility refers to the initiation of helpful acts, and this norm can be shared by all society members via an exchange network where each individual in the social group is expected to help others (Berkowitz & Daniels, 1964; Goranson & Berkowitz, 1966; Greenglass, 1969; Staub, 1972). Based on the objectives of the current research, which focused on the effect of different types of social norms on impulse buying, ‘helping others’ has been selected as representative for the collective prescriptive norms in the experiment.

4.3.5 Sampling

All the participants in the experiments are students who currently study at different levels and different schools at the University of Birmingham, and they were recruited in a variety of ways, such as advertisements, snowball sampling and by a direct approach.

Advertisements about the three experiments (see Appendix 4.1) were posted on the communicating board in the main library, the Business School and the Muirhead Tower at

the University of Birmingham. The students who were eligible (for example, with British nationality) and willing to participate could contact the researcher by themselves via the email address provided in the advertisements. Also the researcher had some friends who were eligible to take a part in the experiment. The researcher then used snowball sampling here, which means the researcher firstly collected data from her existing friends, then recruited future participants from her friends' acquaintances (Chaim, 2008). Also some data were collected from the participants who were asked by the researcher directly in the main library, Birmingham Business School, the Learning Centre, etc. whether they were willing to spend a few minutes to take part.

4.3.6 Student sample

Whether the research findings derived from student samples can be generalized from an experimental setting to "real world subjects" has been recognized, examined, and debated in a variety of disciplines for more than five decades (Peterson, 2001).

Because of the clear differences between students and older adults, student samples have been associated with a lower epitomizing capability to generalize the population, such as their less crystallised attitudes, less-formulated senses of self, and more unstable peer group relations (Sears, 1986) at a younger age, having fewer life experiences and belonging to an unstable social class (Foot & Sanford, 2004).

The external validity is then viewed, meaning the findings can be generalised to different segments of the population (Winer, 1999) and become the principle issue that can be associated with the use of student samples; but in particular, Lynch and Srull (1982) argued that research which aims to perform theory testing, by using an experimental design, is likely to lack external validity because of a lack of consideration of the unidentified factors, which

actually exist in the design. The possibility, therefore, of achieving pure external validity in an experimental design is difficult, regardless of whether or not the data was collected from students (Calder, et al., 1982).

Additionally, as Mook (1983) argued: “*Representativeness of sample is of vital importance for certain purposes, such as survey research. For other purposes, it is a trivial issue.*” (p. 384), those differences between British student samples and older adults might be extremely relevant in other research contexts that require representative samples as a matter of methodological generalization (e.g., survey), but here, the “*Other purposes*” might include the research that aims to draw conclusions about the theory rather than about a population. That means if a research is theoretically focused, then whether the sample comprises students does not matter (Mook, 1983); consequently, for theory testing in a theoretical focused research, student samples or any other kind of participants qualify as research subjects (Mook, 1983; Pernice, et al., 2008; Bello, et al., 2009).

Furthermore, Peterson and Merunka (2014) argued that student samples may represent appropriate research subjects in certain situations, especially if they represent a population of interest. For example, student samples have been used in the research by Ahmed, et al. (2003) that focused on the business students’ perception of ethics and moral judgment. For the current research, which focuses on the investigation of the effect of social norms on consumers’ impulse buying behaviours, university students as members of society, who have been involved in large consumer groups, are an appropriate category for studying in this domain (e.g., Han, et al., 1991; Zhang & Shrum, 2009; Prajapati & Rathod, 2015).

Although the use of student samples has some general pitfalls, and a series of critical observations have been raised over the last six decades, students have still been used as samples in social science research (Peterson, 2001). A significant number of studies and top

international journals with high impact factor still accept research using student samples (e.g. *Journal of Consumer Behaviour, Psychology and Marketing, Journal of Consumer Research, Journal of Consumer Psychology and Journal of Experimental Criminology*). The use of student samples in leading global journals suggests that this is a suitable testing method for theories in the field of social science if the student samples have been used in an appropriate context and manner.

The above arguments support the current research to use a sample which was entirely made up of British students from the University of Birmingham, including undergraduate students, postgraduate students, postgraduate researchers and students from other levels (e.g. pre-sessional students). The differences between student samples and older adults have very little relevance to the current experiment, which is aiming to test the effect of different social norms on consumers' impulsive buying habits but does not test whether the theory might be generally applied to the wider population. The use of student samples in this present research does not represent any particular hindrance for the research questions (e. g. whether the social norms can influence the relationship between consumers' general impulsiveness and their impulse buying behaviours, etc.) that is currently being researched. At the very least, the results that emerged from the student sample could inform future research when conducted using other sample groups.

4.3.7 Sample size and sample power

A pre-test study is what one would call a 'run through' of the actual study, and is a good way of familiarising the research team with the procedures whilst checking if the experiment design has any potential flaws (Amy, 2015). According to Connelly (2008), extant literature suggests that the sample size for a pre-test study should be 10% of the sample of the

projected main study (Treece & Treece, 1982); however, Hertzog (2008) argued that this is not a simple nor a straightforward issue to resolve because many factors can influence the study's design. Nevertheless, Isaac & Michael (1995) and Hill (1998) suggested 10–30 participants for a survey pre-test; while Julious (2005) suggested 12 for a pre-test in the medical field.

The previously published research studies in the field of consumer behaviours, which used experiment design, also indicate an appropriate and acceptable sample size for a pre-test for the experiment: 46 students were used in the pilot study in Luo's (2005) research (*Journal of Consumer Psychology*); Zhang and Shrum (2008) used 36 samples in their pre-test for the manipulation check for the self-construal priming task (*Journal of Consumer Research*), etc.

Thus both the theories and the previous studies supported the notion that the sample sizes for the pilots in the current research are acceptable: 49 students have been used in the pre-test for the buying decisions alternatives' impulsiveness level; and 34 students have been used in the pre-test for the self-construal's priming task.

The purpose of sampling is to investigate the research questions with representation of the population, without spending time and costs involving the entire population in the study (Banerjee & Chaudhury, 2010). Many factors can affect the decisions surrounding the sample size, such as the research objectives, the cost and time constraints, the extent of precision desired (Sekaran & Bougie, 2010). According to Malhotra, et al., (2012), the sample size determination is based on a number of variables including, the nature of the research, sample sizes used in similar studies and any resource constraints, among others.

Previously published research related to impulse buying behaviours indicated an acceptable sample size for the experiments: Rook and Fisher used 99 participants to test the normative influence on impulsive buying (*Journal of Consumer Research*); in Luo's (2005) studies on the effect of shopping with others on impulse purchasing, 128 participants took part in the first study's experiments and 110 participants took part in the second study's experiments (*Journal of Consumer Psychology*); 75 participants were involved in Zhang and Shrum's (2008) research on the self-construal - beer consumption attitude's relationship, and 128 undergraduate students participated in another study that focused on the investigation of the salience of peer presence having a moderate effect on the relationship between self-construal and the state of impulsiveness (*Journal of Consumer Research*), etc..

Based on those previous experiments in the field of impulse buying, an acceptable sample size for the current three studies was decided: 135 students participated in study one, 132 students took part in study two, and 116 students participated in study three.

In summary, according to the literature and the sample size used in the previous consumer behaviour studies, the determined sample sizes for the present research ($n = 49$ for the impulsiveness level's pre-test; $n=34$ for the self-construal priming task's pre-test; $n = 135$, 132, 116 for the three main experiments respectively) can answer the current research questions effectively. Thus, the sample sizes of the present research for pre-test of the impulsiveness level of the six buying decisions alternatives, the priming task for self-construal, and the three main experiments are appropriate and acceptable.

4.3.8 Randomization

As mentioned earlier in Section 4.3, one advantage of using an experiment is that the subjects can be randomly assigned to different groups (Saxe & Fine, 1982; Jones, 1985;

Smith, 2000), meaning that each participant has an equal chance of being assigned to any one group. For example, if a social experiment includes one control group and one experimental group, then each participant has a 50 percent possibility of being assigned to either of them. Randomization is also the central criterion for social experiments because it can enhance the ability to make a valid comparison between groups (Cook & Campbell, 1976). This is the best way to make sure the distribution of participants is even and unbiased across the various conditions, thus making the comparisons across the groups valid because the individual's characteristics should have equal influence on all groups (Saxe & Fine, 1982).

As indicated by Fisher (1960), it is impossible to maintain control over all the variables that might influence the results, because the number of variables is infinite, and obviously can neither be predetermined nor controlled (Saxe & Fine, 1982). But by using randomization procedures, the experimenters can achieve a better group difference comparison dependent on their treatment rather than on any extraneous variable.

This research randomly assigned the participants to different groups. In study one, each participant had an equal chance (33%) of being assigned to any group amongst the prescriptive group, proscriptive group and the control group. In study two, the likelihood of each participant being assigned to one of the five groups (prescriptive * descriptive group, prescriptive * injunctive group, proscriptive * descriptive group, prescriptive * injunctive group, and the control group) was equal. In study three, each participant had an equal chance of being assigned to one of the eight experimental groups. This random assignment improves the validity of group comparison.

4.3.9 Measurement scales of impulse buying

To get a better understanding of the impulse buyers' buying behaviour and impulse buyers' characteristics, many researchers focused on the development of the impulse measure scale which can be used to screen whether a consumer was an impulse buyer or not (Rook & Fisher, 1995; Weun, et al., 1998; Verplanken & Herabadi, 2001; Zhang, et al., 2007; Sun & Wu, 2011; Badgaiyan, et al., 2016).

Rook and Fisher's nine-item impulsiveness scales

For example, Rook and Fisher (1995) hypothesized that buying impulsiveness is a unidimensional construct which can be used to indicate consumers' tendencies both on thinking and acting in distinguishable and characteristic ways. Whether a consumer's general buying impulsiveness can result in real impulse buying behaviour may be affected by many factors, such as the consumer's economic attributes, social status or their shopping frequency, etc. (Hoch & Loewenstein, 1991). Rook and Fisher (1995) proposed that one possible factor that might affect the relationship between a consumer's buying impulsiveness and real impulse buying behaviour is his/her personal normative evaluation. Moreover, they hypothesized that normative evaluation might act as a moderator on a consumer's impulse buying tendency, which they viewed as buying impulsiveness (Rook & Fisher, 1995).

In order to get a more accurate understanding of consumers' impulse buying behaviour and identify the relationship between consumers' buying impulsiveness and impulsive buying behaviour, Rook and Fisher (1995) developed a measurement scale which consisted originally of 35 items. These items were gathered from prior research about impulse buying (e.g. Rook, 1987) and the measures of general impulsiveness (e.g. Eysenck, et al., 1985).

After analysing the survey data which was collected from 281 undergraduate business students, a nine-item scale which could be used to identify consumers' general buying impulsiveness traits was confirmed. The Cronbach's alpha of the final scale was 0.88, which is acceptable, and all t-values exceed 9.0 with $p < 0.001$. In their follow-up research, a relationship was found between consumers' general impulsiveness and final impulse buying behaviour. This relation was only significant in the favourable normative evaluation group. The results verified Rook and Fisher's (1995) hypothesis that consumers' normative evaluation on their current impulse buying played a moderator role on the relationship between consumers' general impulsiveness traits and their final impulsive buying behaviour.

Weun's impulse tendency scales

Bellenger, et al. (1978) suggested that around 40 per cent of all purchases in department stores were impulse buying, some other studies also indicated that a number of consumers changed their proclivity to buy on impulse (Rook, 1987; Rook & Fisher, 1995; Rook & Gardner, 1993). Weun (1998) believed that impulse buying happened frequently in people's daily life, and the challenge was to develop validity scales to measure consumers' impulse buying tendency. In Weun (1998), four sub-studies were conducted to develop and validate the scales.

Based on Nunnally (1978), Churchill (1979) and Anderson & Gerbing (1988), Weun (1998) collected a set of items which could be used to measure impulse buying tendency, and also added some additional items which were resulted from self-reported survey. Weun (1998) then used 212 students as the sample. These students enrolled in classes at a university to assess the initial set of the scale which contained ten items in study one. After being analysed by exploratory factor and item-total correlations, the items whose factor loadings were below 0.40 and/or correlations below 0.50 were crossed out (Nunnally, 1978). Only five

original items remained in the final impulse tendency scale after study one. These scales accounted for 59% variance and their coefficient alpha was acceptable with a high value of 0.83. Overall, study one suggested that the five-item scales were unidimensional and internally consistent after adjustment. Non-student samples were used to test these scales' validity in the second study, and the results were consistent with study one; the two studies indicated that the impulse buying tendency scales were acceptable. The third study provided evidence of discriminant and convergent validity of the impulse buying tendency scales by comparing with General Impulsivity (Gerbing, et al., 1987), Thrill Seeking (Gerbing, et al., 1987), and Future Time Orientation (Gjesme, 1979). The scores indicated that the scales had significant correlation with Impulsivity and Thrill Seeking, but were not correlated with Future Time Orientation as expected. And the last study provided evidence of the scales' predictive validity by collecting interview data from consumers before they started their shopping in a large shopping mall and completed the impulse buying tendency scales after they finished shopping. The responses to the scales stated an acceptable alpha 0.79. Moreover, the scales had a significant effect on actual impulse buying behaviour ($\beta = 0.189$, $p = 0.006$) by analysing the data with logistic regression. Then, the validity of the five-item scales was confirmed by summarizing the results of these four studies; and the scales were suited to identify the impulse buyers.

Other impulse scales

Rook and Fisher (1995) stated that the studies on impulse buying could help people reduce their impulse buying as consumers did not want to act as irrational or immature. But when viewing the studies which were conducted in the past five decades, almost 90 per cent of consumers made their purchases on impulse (Kollat & Willett, 1967; Bellenger, et al., 1978; Cobb & Hoyer, 1986; Welles, 1986; Han, et al., 1991).

As the negative evaluations about impulse buying have little impact on consumers' impulse buying control, Hausman (2000) viewed impulse buying behaviour as a more complex behaviour than in previous studies, and tried to explore the motivations behind consumers' impulse buying behaviour. Hausman (2000) identified a generic method to test consumers' motivations for impulse buying. In the research, Hausman (2000) developed the hypotheses based on the in-depth interview data, and used survey to test these hypotheses in the later stage. Hausman (2000) modified the impulse buying scales developed by Rook and Fisher in 1995 by analysing the semi-structured interview data. Two additional items were added to the scales. After further analysis of the survey data, some items were removed due to their low item-total correlations, which finally resulted in seven-item Likert scales with a high Cronbach's alpha (0.86).

Later, Verplanken and Herabadi (2001) identified the individual difference in impulse tendency and developed 20-item impulse buying scales. The scales contained two factors: 1) an affective factor which included the urge to buy, excitement when buying, etc., 2) a cognitive factor which included the lack of a plan, deliberation in making purchasing decisions, etc. These 20-item impulse buying scales were developed based on the original scales containing 52 items covering the pre-purchase conditions, the feelings during buying and the post-purchase guilt. After analysing the survey data collected from 106 undergraduate students with Varimax rotation, a two-factor solution was explored with 19.3% and 14.36% respectively. The top 10 items with the highest loading in both factors were remained in the impulse buying tendency scales. The total coefficient alpha of the 20-item scales was 0.86, and the alphas for each factor were 0.91 and 0.83 respectively. In the second study, which used a convenience sample of 144 individuals in Norway, similar results were derived: the coefficient alphas were 0.82 and 0.80 respectively and their correlation was 0.54

with $p < 0.001$; and the coefficient alpha of the 20-item scales was 0.87. The similar results in those two studies indicated that the scales were reliable and valid.

Identifying consumers' impulsiveness by using scales can help researchers understand consumers' impulse buying more accurately. Based on the nature of the current research, which is investigating the relationship between consumers' impulsiveness traits and impulse buying, Rook and Fisher's (1995) nine-item impulsiveness scale has been selected for the current research.

4.3.10 The used measurement scales

The impulsiveness scale

A scale that contained nine items has been selected and used to measure consumers' general impulsiveness traits. The nine items included "*I often buy things spontaneously*", "*'Just do it' describes the way I buy things*", "*I often buy things without thinking*", "*'I see it, I buy it' describes me*", "*'Buy now, think about it later' describes me*", "*Sometimes I feel like buying things on the spur-of-the-moment*", "*I buy things according to how I feel in the moment*", "*I carefully plan most of my purchases*" (reverse coded), "*Sometimes I am a bit reckless about what I buy*" (Rook & Fisher, 1995; p. 308); the response format used a Likert scale that ranged from 1 (strongly disagree) to 5 (strongly agree). This impulsiveness scale was developed by Rook and Fisher (1995) for their research, which focused on the normative influence on impulsive buying⁵, the scale's Cronbach's alpha was 0.88 which is good, and all *t*-values exceed 9.0 with $p < .001$; all these results confirmed the scale's reliability. This scale has been employed by many researchers since its development by Rook and Fisher

⁵ The scale's Chi-Square was 49.45 ($df = 0.27$; $p < 0.01$), AGFI was 0.92, GFI was 0.97, NFI was 0.94.

(1995), such as in Jacqueline and Julie's (2002) study on the influence of culture on consumer impulse buying behaviour; Joann and Terry's (2006) study on individual and environmental influences on impulse purchasing; and Nadira, et al.'s (2015) study on impulse purchasing behaviour in the Algerian cultural context, etc.

The impulsive urge scale

Except for the selected impulsiveness scale, a four-item scale has also been selected and used to measure consumers' immediate impulse buying urge: a) *"I experienced a number of sudden urges to buy"*, *"I wanted to buy things even though they were not on the shopping list"*, c) *"I had strong urges to make impulse purchases"*, and d) *"I felt a sudden urge to buy"* (Luo, 2005; p. 290). Participants were asked to rate on a seven-point Likert scale that ranged from 1 (strongly disagree) to 7 (strongly agree); the mean of those items was used as an indicator of the impulsive urge. This scale was used by Luo (2005) in his research concerning the effect of shopping with others on impulse purchasing, and a 0.83 Cronbach's α was recorded in his principle studies. The four-item- scale was also selected to measure consumers' urges to buy impulsively in Kaplan and Haenlein's (2013) research on impulse buying behaviours within the virtual world.

4.3.11 Pre-testing

Pre-test for the impulse level of impulse buying decision alternatives

The measurement for buying decisions in this research consists of six buying choices that have been developed based on Rook & Fisher's (1995) five buying alternatives. In Rook & Fisher's (1995) experiment, participants were asked to select one of the five buying decision alternatives that Mary would make after reading the scenario. Rook and Fisher (1995) designed the five buying decision alternatives to represent varying levels of consumers'

impulse buying; from low to high impulsiveness. The five decision alternatives were: “(1) *buying only the socks*, (2) *wanting the sweater but not buying it*, (3) *deciding not to buy the socks*, (4) *buying both the socks and sweater with a credit card*, (5) *buying these plus matching slacks and a shirt, also with a credit card.*” (p. 308). Rook and Fisher (1995) explained why “not buying the socks” was viewed as more impulsive than “buying only the socks” and “wanting the sweater but not buying it” as Mary had been described as planning to buy the socks, then changing her plan was viewed as being impulsive by some experiment participants.

These five buying decision alternatives were also used in Luo’s (2005) experiments to measure the respondents’ impulse buying decisions. Luo (2005) performed a pre-test with an independent sample (46 undergraduate business students) before conducting the main study by asking the respondents to rate the impulsiveness of each buying alternative across a 10-point scale ranging from 1 (lowest impulsiveness) to 10 (highest impulsiveness), and the results confirmed the order of impulsiveness and the five decision alternatives were the same as those of Rook and Fisher (1995). From low to high impulsiveness, they were as follows: “buying only the socks” was rated lowest ($M = 0.51$); “wanting the sweater and not buying it” ($M = 1.83$); “deciding not to buy the socks” ($M = 2.98$); “buying both the socks and the sweater with a credit card” ($M = 8.92$); and “buying both, plus matching slacks and a shirt, also with the credit card” ($M = 9.34$). The reasoning behind the alternative “deciding not to buy” (the third decision alternative) was identified as having a higher level of impulsiveness than “buying only the socks” (first decision alternative) and “wanting the sweater and not buying it” (second decision alternative), was based on Rook and Fisher’s (1995) explanation, Luo (2005) further argued that this could be because the survey

participants interpreted “deciding not to buy” as meaning that Mary decided to buy the sweater but not the socks.

Both Rook and Fisher (1995) and Luo (2005) explain that participants might place different interpretations on the alternative “deciding not to buy”, and this uncertainty might lead to an inexact impulsiveness order for the purchase alternatives. In order to develop a more precise order for the impulsion around buying decisions, this research amended the buying alternative of “deciding not to buy” into “Deciding not to buy the socks, no purchase at all” and “Deciding to buy the sweater with a credit card and not the socks”, plus the other four alternatives, a total of six buying decision alternatives were developed in this research.

To confirm the impulsiveness levels of the six buying decision alternatives, a pre-test was conducted with an independent student sample (a list of the six buying decisions is given in Table 4.4); the mode and average for each buying decision have been used to represent the varying impulsiveness level of the buying alternatives, and the impulsiveness levels of the buying alternatives have been used in this research to indicate the consumer’s actual buying impulsiveness (see the pre-test questionnaire in Appendix 4.2) .

Table 4.4 The list of possible buying decisions

| | |
|------------|--|
| Decision 1 | Direct buying the socks only |
| Decision 2 | Wanting the sweater but not buying it, buying the socks |
| Decision 3 | Buying these plus matching jeans and a shirt, also with a credit card |
| Decision 4 | Deciding to buy the sweater with a credit card and not the socks |
| Decision 5 | Deciding not to buy the socks, no purchase at all |
| Decision 6 | Deciding to buy the sweater with the socks together with a credit card |

Pre-test for the self-construal priming task

Hamilton and Biehal's (2005) priming task was used to prime participants' self-construal in the third study of the current research. This priming task was also used by Zhang and Shrum (2008) in their study about the influence of self-construal on impulsive consumption. In the priming procedure, participants were asked to write down all their thoughts after being told either "*Remember, enjoying relationships with your family or friends is what it is really all about*" (priming dependent self-construal) or "*Remember, enjoying your life is what it is really all about*" (priming independent self-construal). The scale contains six items (see Appendix 4.3) that were used to measure. The results confirmed that the manipulation was successful (see section 5.2 for results).

4.3.12 Experimental procedures

Each participant was randomly assigned into one sub-group under the study, which meant each participant had an equal chance to be assigned into any sub-group. For example, participants for study one have an equal chance of being assigned to one of the three groups (two experiment groups and one control group); participants for study two have an equal chance of being assigned into one of the five groups (four experiment groups and one control group); and participants for study three should be randomly assigned into one of the eight experiment groups.

After allocating the participants into groups, the researcher gave a short explanation about the background of the current experiment, its purpose and procedures (see the information sheet in Appendix 4.4), and a consent form (Appendix 4.5) was provided to each participant which included information such as how participants' data will be protected. After all the participants finished reading and signing the consent form, the main experiment started.

Only the participants who signed the consent form were allowed to stay and continue with the following experiment.

The participants who took part in study one were asked to rate a nine-item impulsiveness scale first, then they were asked to make a buying decision for ‘Mary’ under the buying scenario, followed by two manipulation check questions. In the main experiment for study two, participants were asked to rate a four-item impulsive urge scale and make a buying decision by imagining they were ‘Mary’ under the buying scenario, and they were also asked to answer two questions for manipulation check purposes at the end. The participants in study three were primed to firstly either dependent self-construal or independent self-construal by the priming task, then they were asked to answer the same questionnaire used in study two, which contains impulsive urge scale, buying decision selection, and manipulation check questions (see the questionnaires in detail in Appendix 4.7, 4.8 and 4.9).

As indicated by Weber and Cook (1972), Cooper (1976) and Weiss (2001), certain socially relevant aspects of behaviour can only be studied if people are caught off guard. If participants knew some socially undesirable behaviours (i.e. antisocial behaviour) were being observed in the experiments, then they would behave as well as possible to others (i.e. experimenter or other participants in the same experiment) (Weber & Cook, 1972; Cooper, 1976; Weiss, 2001). Then the *“psychologist runs the risk of distorting the reactions of his or her subjects and ultimately limiting the applicability of the research findings”* (Kimmel, 1996, p. 68). Thus, deception about the real research purpose was used in the present research to collect more “natural” data and valid results (Hertwig & Ortmann, 2008).

After collecting all participants’ questionnaires in the group, the researcher would give a short debriefing explanation (see the debriefing material in Appendix 4.6) about the

experiments' real purpose as the previous explanation given by the researcher was not the experiment's real background and purpose (using "the effect of configurations of the malls on impulse buying" instead of "social norms", see the information sheet in Appendix 4.4). Participants were told that if they did not want to be involved in this research, they were still free to withdraw without any consequences. Only the remaining participants' data was included in the data analysis.

4.4 Data analysis methods

4.4.1 Parametric methods

Correlation

Correlation analysis is appropriate and useful when researchers are attempting to establish if a relationship exists between two variables, and Pearson's product-moment correlation deals with interval or ratio data (O'Brien & Scott, 2012). For example, a researcher might be interested in whether there is a relationship between students' IQ levels and their examination results. It would be expected that students with a higher IQ would also have higher examination marks, and this relationship indicates a higher degree of positive correlation between students' IQ and their examination results.

Study one in the current research aimed to investigate whether there is a relationship between consumers' general impulse traits and their impulsive buying behaviours when they have been influenced by different social norms. Pearson's correlation has been used to analyse the relationship between consumers' impulse traits and impulsive buying decisions in study one. The moderator regression analysis is inappropriate here because it examines whether the traits-behaviour relationship is affected by normative evaluations; it answers the

question: “*Do changes of consumers’ impulsiveness level account for identical changes in their buying behaviours, in different normative conditions?*” (Rook & Fisher, 1995; p. 308).

Whilst a comparison of product moment correlations across different normative subgroups answers the question: “*Do the consumers’ buying impulsiveness traits explain the variation in their impulsive buying behaviour in each normative subgroup?*” (Rook & Fisher, 1995; p. 308). Based on the nature of the current research, Pearson’s correlation has been chosen.

Pearson’s correlation is a measure of the strength and direction of the association that exists between two independent continuous variables. The coefficient of Pearson’s correlation is denoted as r . Pearson’s correlation attempts to draw a line of best fit through the data of two variables, and the coefficient of Pearson’s correlation r indicates the distance between all these data points and this line of best fit. (Moore, et al., 2013). The value of r ranges from -1 (perfect negative relationship) to 1 (perfect positive relationship), and the value of 0 indicates no relationship between the two variables.

ANOVA

Analysis of variance (ANOVA) is the most efficient method available for the analysis of experimental data. ANOVA can analyse the experimental data under particular scenarios allocated to different group, with many different variations (Armstrong, et al., 2002). ANOVA has been used in the current research to determine the mean difference between different experimental groups.

ANOVA or *F-test* has been widely used as a common statistical technique in educational and psychological research (Keselman, et al., 1998). *F-test* assumes that the data of the dependent variables is normally distributed with equal variances among different groups. But in real experiments, data are often not normally distributed and the variances of different

group data are not always equal (Blanca, et al., 2017). With regard to normality, some researchers analysed their studies with real data and found that the majority of the data did not meet the normality criteria (e.g., Harvey & Siddique, 2000; Kobayashi, 2005; Van Der Linder, 2006). For example, Micceri (1989) analysed 440 distributions of ability measures and found most of them were contaminated; these results were consistent with the normality analyses of other studies with real data, such as in the 693 psychological variables analyses conducted by Blanca, et al., (2013), 80 percent of which broadly departed from normal distribution having values of skewness and kurtosis ranging between -1.25 and 1.25.

Based on most early studies, many classical research methods handbooks in psychology draw the following conclusions: the *F-test* shows robust to moderate departures from normality when the sample sizes are reasonably large (Winer, et al., 1991), and moderate departures from normality have little effect on the fixed-effects analysis of variance (Montgomery, 1991) and do not constitute a serious problem (Keppel, 1982). In a more recent study that investigated the robustness of the *F-test* to non-normality data, the results showed that the *F-test* was robust in 100% of cases studied, independently of the experiments' manipulations; and the *F-test* is robust regardless of the sample size, the degree of deviation of normal distribution and the equal or unequal distribution between groups, etc. (Blanca, et al., 2017). To summarize, the *F-test* is robust with non-normality experimental data under different experiment manipulations.

T-test

The *T-test* is a parametric statistical analysis technique, which can be used to compare the mean difference between two groups, and has been widely used in psychology and social science research (de Winter, 2013). It was developed by William Sealy Gosset in 1908 as a means to control the quality of dark beers (Student, 1908; Box, 1987).

This test has two types: independent *t*-test and paired *t*-test. The independent *t*-test can be used when the data of the two comparison groups are independent; and the paired *t*-test can be used when the data of the two comparison groups are gathered from the same respondents, and are dependent on each other (Kim, 2015). For example, when dividing the experimental subjects into two independent groups (A and B), group A treated with A and group B treated with B, researchers can acquire the difference between group A and B by using the independent *t*-test. The difference in the results would be close to zero if there was no difference between the two treatments; while the paired *t*-test can be used to do an intergroup comparison of the changes in each group (pre A vs. post A; pre B vs. post B). The difference in the results would be close to zero if there was no difference in the sample means before and after the treatment (pre A vs. post A; pre B vs. post B).

In this research, the independent *t*-test has been used to compare the difference in means in the different subgroups. For example, the independent *t*-test has been used to determine the difference between two self-construal priming groups, the impulsive urge and decisions' difference in two different experimental groups, etc.

4.4.2 Nonparametric methods

With the exception of the two parametric analysis statistics mentioned above, nonparametric methods is another statistical inference that can be used to analyse the experimental data. Parametric methods refer to a statistic technique that can be used to infer the parametric of the distribution with a set of independent variables data, which are normally distributed with equal variances. When the probability distribution cannot be defined or the variables' variances are not equal, nonparametric methods should be employed (Whitley & Ball, 2002).

Nonparametric methods provide an alternative series of statistical methods that do not require any assumptions about the data, or very limited ones. Different nonparametric methods can be chosen depending on different circumstances, but some of them are more commonly used, such as the Kruskal–Wallis test, which can be used instead of the one-way, such as ANOVA, whereas the Mann-Whitney U test can be used instead of the independent T-test, etc. (Whitley & Ball, 2002).

The Kruskal–Wallis test is a nonparametric test which can be used to analyse data without the assumption of normal distribution and equal variance of the results across groups, so it can be used instead of one-way ANOVA when those assumptions are not met. In the same way as one-way ANOVA, the Kruskal–Wallis test assesses the significant differences of a continuous dependent variable by a categorical independent variable (with two or more groups) (McDonald, 2014).

The Wilcoxon rank sum test, which is also known as the Mann-Whitney U test, is a nonparametric alternative to the unpaired T-test. This test can be used in analysis that aims to compare two sample means between two independent groups (Whitley & Ball, 2002), and to test whether the two sample means are equal or not (Nachar, 2008).

In the current research, because some data are non-normally distributed, the nonparametric methods have been conducted to further analyse the data. For example, the Kruskal–Wallis test was used to analyse the distribution of the buying decisions in the prescriptive group, the proscriptive group and the control group in study one; and the Kruskal–Wallis test was also used to analyse the impulsive urge and buying decisions' differences among the prescriptive group, the proscriptive group and the control group in study two. The Mann-Whitney U test was used to test the differences in buying decisions between the prescriptive group and the proscriptive group in study three.

4.5 Summary

In summary, after considering the research onion's outer and inner layers, which are relative to the considerations of the research philosophy, the research approach and research strategy, the present research has been designed as a quantitative approach that is aligned with the positivist philosophy and the deductive approach. Based on consumer behaviour theories and previous research that relates to consumer impulse buying behaviours, a design of experimental study has been selected for this research. This followed a random group assignment in all three experimental studies (one control group and two experimental groups) that were subjected to different types of social norms in study one; one control group and four experimental groups were subjected to different types of social norms and the types of delivery in study two; and eight experimental groups were subjected to the different elements that related to social norms and self-construal in study three). The experiments aimed at testing the effect of social norms on the relationship between consumers' general impulsive traits and impulse buying behaviours, how different social norms can influence consumers' immediate urges and buying behaviours, and how different types of self-construal can further influence that effect. The findings of the experimental studies are discussed in Chapter 5.

CHAPTER 5 EXPERIMENTAL STUDIES'

FINDINGS

5.1 Introduction

This chapter presents the results of the experimental study conducted to meet the research objectives RO 1 ('To investigate whether social norms can moderate the relationship between consumers' general impulsiveness and their impulse buying behaviour'), RO 2 ('To understand how different types of social norms can influence consumers' impulse buying differently') and RO 3 ('To examine how consumers' activated self-construal can further influence the social norms' effect on impulse buying'). In particular, this chapter presents the findings of a series of tests that are undertaken to examine a series of relationships between the variables of impulsiveness trait and impulse buying decisions. Hypotheses about the assumed types of links between the variables were presented in Section 5.4 and were developed based on the literature review (Chapter 2). In summary, the hypotheses were developed to test if: a) different types of social norms have a different moderating effect on the relationship between consumers' general impulsiveness traits and impulse buying (H1a, H1b); b) the interactive effect of social norms types and the deliver ways on consumers' impulse buying (H2a, H2b); c) the interactive effect of social norms types, the deliver ways and the self-construal on impulse buying (H3a, H3b).

This chapter starts by presenting the pre-test and statistical assumptions test (Section 5.2 and Section 5.3). This is followed by descriptive statistics and the results of the tests which examined the social norms' effect on impulse buying (Sections 5.4, 5.5 and 5.6). The chapter concludes with a summary of the findings (Sections 5.7).

5.2 Pre-testing results

5.2.1 The impulsiveness level of the six buying decisions

As mentioned earlier in Chapter 4, a student sample has been used in the pre-test for the varying impulsiveness levels of six buying decisions (a list of the six buying decision can be found in Table 5.1), 49 students in the University of Birmingham have been randomly selected. They have been asked to sort the rank the six buying decisions which Mary might makes; along a six-point scale ranging from 1 (lowest impulsiveness) to 6 (highest impulsiveness) after they were presented with the control scenario.

Table 5.1 The list of consumers' possible imagined buying decisions

| | |
|------------|--|
| Decision 1 | Direct buying the socks only |
| Decision 2 | Wanting the sweater but not buying it, buying the socks |
| Decision 3 | Buying these plus matching jeans and a shirt, also with a credit card |
| Decision 4 | Deciding to buy the sweater with a credit card and not the socks |
| Decision 5 | Deciding not to buy the socks, no purchase at all |
| Decision 6 | Deciding to buy the sweater with the socks together with a credit card |

($N = 49$)

As a results, in Table 5.2, it is clear to see that the mode ($N = 38$) of the rankings for Decision 01 (Direct buying the socks only) was 1, that means this decision has been rated as the lowest impulsiveness buying decision among the six buying decisions; followed by Decision 02 (Wanting the sweater but not buying it, buying the socks) with the mode ($N = 35$) in the sort order 2; Decision 06 (Deciding to buy the sweater with the socks together with a credit card) has been sorted with a mode in the rank order 3 ($N = 27$); Decision 05 (Deciding not to buy the socks, no purchase at all) has been sorted most frequently in the sort order 4 ($N = 17$); Decision 04 (Deciding to buy the sweater with a credit card and not the socks) has been sorted with a mode of 18 in the sort order 5; Decision 03 (Buying these plus matching jeans

and a shirt, also with a credit card) has been sorted as the highest impulsiveness buying decision by 24 respondents.

Table 5.2 The mode of the rank for the 6 imagined buying decisions

| N Rank Order | Decision 1 | Decision 2 | Decision 3 | Decision 4 | Decision 5 | Decision 6 |
|------------------------|------------|------------|------------------|------------|------------|------------------|
| 1 | 38 | 11 | | | | |
| 2 | 11 | 35 | | | 2 | 1 |
| 3 | | 3 | | 7 | 13 | <u>27</u> |
| 4 | | | 10 | 7 | 17 | 14 |
| 5 | | | 15 | 18 | 9 | 7 |
| 6 | | | <u>24</u> | 17 | 8 | |
| Total | 49 | 49 | 49 | 49 | 49 | 49 |

Because respondents have been asked to rate each buying decision that Mary might make using a scale which ranges from 1 (lowest impulsiveness) to 6 (highest impulsiveness), then the averaged rating for each buying decision can be used to assess each buying decision's overall impulsiveness level (Luo, 2005). As shown in Table 5.3, Decision 01 "Direct buying the socks only" was rated lowest ($M = 1.22$); followed by Decision 02 "Wanting the sweater but not buying it, buying the socks" ($M = 1.84$); Decision 06 "Deciding to buy the sweater with the socks together with a credit card" ($M = 3.55$); Decision 05 "Deciding not to buy the socks, no purchase at all" ($M = 4.16$); Decision 04 "Deciding to buy the sweater with a credit card and not the socks" ($M = 4.92$); Decision 03 "Buying these plus matching jeans and a shirt, also with a credit card" ($M = 5.29$).

Table 5.3 The Means of 6 imagined buying decisions

| | Decision 1 | Decision 2 | Decision 3 | Decision 4 | Decision 5 | Decision 6 |
|------|------------|------------|------------|------------|------------|------------|
| Mean | 1.22 | 1.84 | 5.29 | 4.92 | 4.16 | 3.55 |
| N. | 49 | 49 | 49 | 49 | 49 | 49 |
| SD. | 0.42 | 0.51 | 0.79 | 1.04 | 1.12 | 0.77 |

Then the rank order of the six buying decisions' impulsiveness level has been confirmed depended on the mode and means of each buying alternative, as shown below in Figure 5.1. This impulsiveness order of the six buying decision alternatives has been used in the current research to measure participants' final buying decisions' impulsiveness.

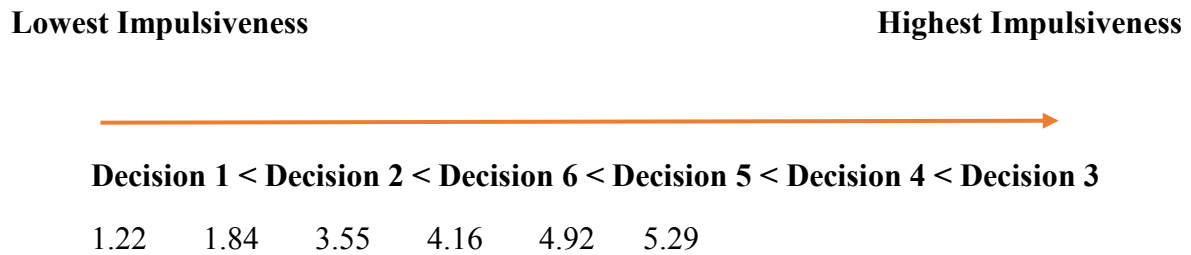


Figure 5.1 The Impulsiveness level of the 6 imagined Buying Decisions depending on the Ranking

5.2.2 The self-construal priming task

A pre-test had been conducted for the self-construal priming task which had been used in study three. A student sample ($N = 34$) was randomly signed into one of the two priming groups. Both the results of ANOVA ($F(1, 32) = 163.71, p = 0.000$) and T-test ($t = 12.80, p = 0.000$) showed there was a significant difference between the two groups: the participants in one group had been primed to dependent self-construal, and another group's participants had been primed into independent self – construal. Those results indicated the self – construal priming task worked successfully and could be subsequently used in the main experiment.

Table 5.4 One-way ANOVA on the self-construal scale between the two priming groups

| | Sum of squares | df | Mean square | F | Sig. | Levene statistic sig. |
|----------------|----------------|----|-------------|---------|-------|-----------------------|
| Between groups | 89.416 | 1 | 89.416 | 163.705 | 0.000 | 0.245 |
| Within groups | 17.478 | 32 | 0.546 | | | |
| Total | 106.894 | 33 | | | | |

Note: Significant level at the 0.01.

Table 5.5 The independent T-Test on the mean of self-construal scale depend on priming groups

Dependent Variable: Mean of self-construal's scale

| | group | N | Mean | t | df | Sig. (2 – tailed) |
|------------------------------|-------------|----|--------|--------|----|-------------------|
| Mean of self-construal scale | Dependent | 18 | 2.2504 | 12.795 | 32 | 0.000 |
| | Independent | 16 | 5.4994 | | | |

Note: Significant level at the 0.01.

5.3 Data screening and testing of statistical assumptions

Before the data was analysed, data screening and assumption checks were made using the software SPSS 24. These steps were taken because both measures are essential in selecting the tests and interpreting the results. The hypotheses testing plan presumed the use of the correlation, one-way ANOVA, two-way ANOVA, and independent T-test in the case of H1a, H1b, H2a, H2b, H3a, and H3b. The preliminary tests showed that missing data and violation of normal distribution were unlikely to represent an issue in the interpretation of the results and that the main assumptions for ANOVA and T-test were met (see Appendix 5.1).

5.4 Testing the moderation effect of social norms on impulse buying in study one

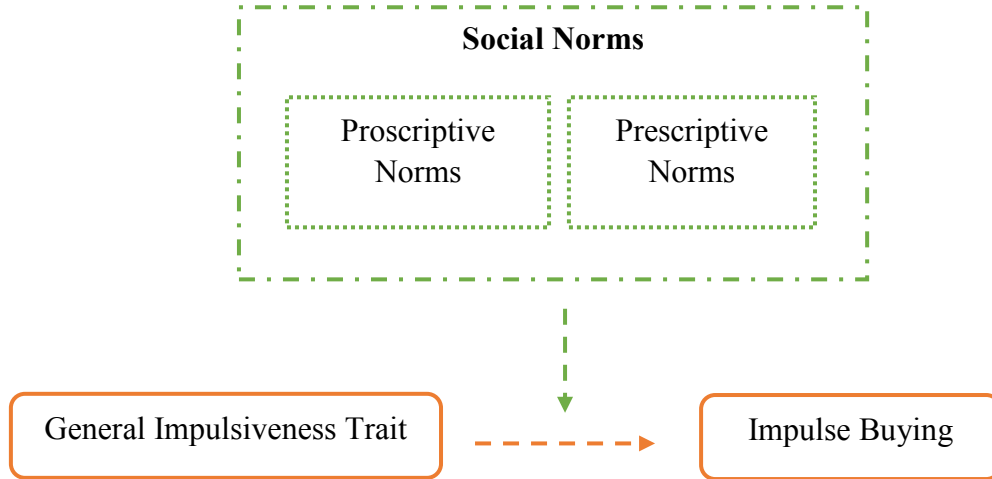


Figure 5.2 The conceptual framework of study one

5.4.1 Respondents' profile

The respondents' education levels included undergraduate (42.2%), postgraduate (44.4%), postgraduate research (10.4%), and others (i.e. all other education levels excepted undergraduate, postgraduate and postgraduate research) (3.0%) (see Table 5.6). And 40.7% respondents were male (55 out of 135), while 59.3% were female (80 out of 135) (see Table 5.7).

Table 5.6 The distribution of subjects by the education level

| Education level | Frequency | Percent (%) |
|-----------------------|-----------|-------------|
| Undergraduate | 57 | 42.2 |
| Postgraduate | 60 | 44.4 |
| Postgraduate research | 14 | 10.4 |
| Others | 4 | 3.0 |
| Total | 135 | 100.0 |

Table 5.7 The distribution of subjects by gender

| Gender | Frequency | Percent (%) |
|--------|-----------|-------------|
| Male | 55 | 40.7 |
| Female | 80 | 59.3 |
| Total | 135 | 100.0 |

5.4.2 Manipulation checks for study one

Manipulation Checks

- *Sample's validity*

Participants have been asked to answer two verification questions (Q 3: “When reading the scenario, have you recognized that the imaginary character (MARY) saw a sticker that contained normative information”; Q4: “Please circle the answer that shows how much you agree/disagree with the statement: ‘The normative information on the sticker encouraged ME to buy the sweater’”) at the end of the experiments in order to make sure all participants have received the correct social norms’ information from the scenarios. The participants ($N = 5$) who gave inappropriate answers for question 3 and 4 have been omitted from the data analysis. For question 3, the participants who chose the answer of ‘No’ have been excluded from the valid data. For question 4, the participants who chose 1 (strongly disagree), 2 (disagree) and 3 (somewhat disagree) in the prescriptive groups; and who chose 5 (somewhat agree), 6 (agree), and 7 (strongly agree) in the proscriptive groups have been omitted from the final data analysis as invalid data.

- *Experiment design's validity*

The participants in the prescriptive group ($M = 2.7111$) reported a higher likelihood impulsive buying than in the proscriptive group ($M = 1.7556$). The results of univariate analysis of variance on participants' buying decisions showed that there was a significant difference between the proscriptive group and prescriptive group's buying decisions, $F(1, 88) = 38.017, p = 0.000$ (Table 5.8). And the results of independent T-test also indicated that there was a significant difference on consumers' buying decisions between proscriptive group and prescriptive group ($t = -6.166, p = 0.000$) (Table 5.9). Those significant difference on consumers' buying decisions between groups confirmed that the different types of social norms, as the experimental factors were designed successfully (see details in Appendix 10).

Table 5.8 The One-way ANOVA on consumers' buying decisions between proscriptive group and prescriptive group

| | Sum of squares | df | Mean square | F | Sig. | Levene statistic sig. |
|----------------|----------------|----|-------------|--------|-------|-----------------------|
| Between groups | 20.544 | 1 | 20.544 | 38.017 | 0.000 | 0.000 |
| Within groups | 47.556 | 88 | 0.540 | | | |
| Total | 68.100 | 89 | | | | |

Note: Significant level at the 0.01.

Table 5.9 The independent T-Test on buying decisions of prescriptive group and proscriptive group

Dependent Variable: Buying decisions

| | Group | N | Mean | t | df | Sig. (2 – tailed) |
|------------------|--------------------|----|--------|--------|--------|-------------------|
| Buying decisions | Proscriptive group | 45 | 1.7556 | -6.166 | 61.837 | 0.000 |
| | Prescriptive group | 45 | 2.7111 | | | |

Note: Significant level at the 0.01.

The reliability check for the impulsiveness scale

The Cronbach's Alpha of the 9-items impulse scale (Rook and Fisher, 1995) which has been used to test participants' general impulsiveness trait confirmed the scales' reliability: $\alpha = 0.90$ in proscriptive group, $\alpha = 0.86$ in prescriptive group, $\alpha = 0.78$ in control group, and $\alpha = 0.86$ in all three groups (Table 5.10).

Table 5.10 The Cronbach's Alpha in different groups

| | N | N of Items | Cronbach's Alpha (α) |
|--------------------|-----|------------|-------------------------------|
| Proscriptive Group | 45 | 9 | 0.898 |
| Prescriptive Group | 45 | 9 | 0.858 |
| Control Group | 45 | 9 | 0.781 |
| All Participants | 135 | 9 | 0.864 |

In summary, the group equivalence check on participants' impulsiveness trait between the three groups (two experimental groups and one control group) confirmed there was no significant difference between groups; and the group equivalence check on the impulsive trait and buying decisions all confirmed the sample has no difference based on locations, weeks and gender. All the checks are important for the present research's next step as they indicated that the different experimental results' between groups are caused by the experimental variables, not by those non-experimental factors.

5.4.3 The main findings of study one

Group equivalence on impulsiveness traits between groups

Group equivalence on general impulsiveness was confirmed through the results of ANOVA test and corresponding post-hoc test (Tukey). They established that the general impulsiveness traits in the three groups was equivalent before the exposure to the different

buying stimuli in the scenarios. This was important to test for because it can confirm whether the participants were from the same population, and also can clarify the different experimental data were caused by the experimental variables, not the participants' segments.

The results of One-Way ANOVA test on respondents' general impulsiveness traits in the two experimental groups and the control group showed that there was no significant difference ($F(2,132) = 2.934, p > 0.05$) between the groups (prescriptive group, proscriptive group and the control group) in terms of impulsiveness trait, that means the experiments' results were comparable (see details in Appendix 5.2). And the results of the test of homogeneity of variances ($p > 0.05$) and the normal distribution test (Shapiro-Wilk test: $p > 0.05$ in all the three groups) on impulsiveness trait also confirmed there were no significant differences between the three groups (two experiment groups and the control group) (see details in Appendix 5.1). The post-hoc (Tukey) results shown there were no significant differences between any two groups (see details in Appendix 5.3), that was consistent with the above One-Way ANOVA's results. Then both ANOVA and Tukey's results confirmed that the independent variables were equivalent before the exposure to different stimuli under different scenarios.

Group equivalence on demographics

- *The locations of data collection*

The experiment data in study one has been collected at different locations i.e. the main library of the University of Birmingham ($N = 39$), the Guild of Students ($N = 43$), Birmingham Business School ($N = 28$) and some other places ($N = 25$) in the University of Birmingham, such as the food hall and Student Center, etc... Some tests have been conducted

to check the data collected from those different locations were comparable. This was important because it can confirm the difference experimental data were caused by experimental variables.

The results of One-Way ANOVA on impulsiveness trait dependent on where the data has been collected showed that there has no significant different on participants' impulsiveness between different locations of where the data has been collected, $F(3, 131) = 1.00, p > 0.10$, (See Appendix 5.4). And the post-hoc test (Tukey) also confirmed that there was no significant difference ($p > 0.10$ in every two locations comparison) between the data that were collected from different places (see details in Appendix 5.4).

Except for the group equivalence check for participants' impulsiveness, the participants' buying decisions among different data collection places also have been checked by ANOVA and Tukey. The results of One-Way ANOVA on buying decisions showed there were no significant difference between participants' buying decisions based different data collection locations, $F(3, 131) = 1.128, p > 0.10$ (see Appendix 5.5). The results of Tukey on the multiple comparisons on buying decisions between different data collection places also confirmed there was no significant difference between the data which have been collected from different locations ($p > 0.10$ in every two locations comparison) (see details in Appendix 5.5).

- *The weeks when data has been collected*

The experiment data used in study one has been collected separately during three weeks: 29 data have been collected in week one; 53 data have been collected in week two and another 53 data have been collected in week three. The One-Way ANOVA and Tukey tests have been conducted to check the data collected during the three weeks were comparable. The results of One-Way ANOVA on impulsiveness trait depended on when the data has been

collected showed that participants' impulsiveness has no significant difference ($F(2, 132) = 0.124, p > 0.10$) between different weeks of when the data has been collected (see Appendix 5.6). And the post-hoc test (Tukey) also confirmed that there has no significant difference ($p > 0.10, p > 0.10, p > 0.10$) between the data that were collected in different weeks (see details in Appendix 5.6).

The results of One-Way ANOVA on participants' buying decisions showed that the data which have been collected in different weeks have no significant difference, $F(2, 132) = 0.158, p > 0.10$ (see Appendix 5.7). That is consistent with the Tukey's results which showed no significant difference appeared between different data collection's weeks ($p > 0.10$ for all comparisons between the three weeks) (see Appendix 5.7).

- *The participants' gender*

The participants in the experiment of study one included both male student samples ($N = 55$) and female student samples ($N = 80$). The One-Way ANOVA and independent T-test have been conducted to check the data collected from male students and females students were comparable. The results of One-Way ANOVA on impulsiveness trait depended on participants' gender showed that the participants' impulsiveness has no significant difference ($F(1, 133) = 0.001, p > 0.10$) between male and female participants (see Appendix 5.8). And the independent T-test also confirmed that there has no significant difference ($t = -0.037, p > 0.10$) between male participants and female participants (see details in Appendix 5.8). For the participants' buying decisions, both One-Way ANOVA and independent T-test's results showed that the data collected from male students and female students were comparable with no significant difference between them, $F(1, 133) = 0.670, p > 0.10, t = -0.818, p > 0.10$ (see details in Appendix 5.9).

Main findings

The experimental results of study one supported the two hypotheses, there is a relationship between consumers' impulsiveness traits and buying decisions when the consumers have been influenced by prescriptive norms (H1a); while there is no relationship between consumers' impulsiveness traits and buying decisions when the consumers have been influenced by proscriptive norms (H1b). These was tested with correlations and the findings would be stated below.

For prescriptive social norms group, the correlation between consumers' impulsiveness traits and buying decision was 0.626 ($p = 0.000$) (top part in Table 5.11), this results mean that there had a relationship between consumers' impulsiveness traits and buying decisions when they have been influenced by prescriptive norms; while for proscriptive social norms group, the correlation between consumers' impulsiveness traits and buying decisions was 0.091 ($p > 0.10$) (middle part in Table 5.11). In other word, no significant relationship was found between consumers' impulsiveness traits and buying decisions.

For the control group, there was a correlation between consumers' impulsiveness traits and buying decisions ($r = 0.462$, $p < 0.01$) (bottom part in Table 5.11). As expected, the correlation was not that strong when compared with the Pearson's correlation in prescriptive social norms group ($r = 0.626$, $p = 0.000$), that was because the participants in the control group were not expressed to a strong prescriptive social norms that encourage them to behave an impulsive buying.

Table 5.11 The correlation between consumers' impulsiveness traits and buying decisions in the prescriptive group, proscriptive group and control group

| | | | Impulsiveness traits | Buying decisions |
|--------------------|----------------------|---------------------|----------------------|------------------|
| Prescriptive group | Impulsiveness traits | Pearson correlation | 1 | 0.626** |
| | | Sig. (2-tailed) | | 0.000 |
| | | N | 45 | 45 |
| proscriptive group | Impulsiveness traits | Pearson correlation | 1 | 0.091 |
| | | Sig. (2-tailed) | | 0.553 |
| | | N | 45 | 45 |
| Control group | Impulsiveness traits | Pearson correlation | 1 | 0.462** |
| | | Sig. (2-tailed) | | 0.001 |
| | | N | 45 | 45 |

** . Correlation is significant at the 0.01 level (2-tailed).

All the results in the prescriptive group supported the view of consumers who have been influenced by prescriptive norms in a buying situation were more likely to act in a way that was consistent with the degree of their general impulsiveness. The lack of a significant relationship between the consumers' impulsiveness traits and buying decisions in the proscriptive group also was confirmed as hypothesized, because of the possible variation in consumers' response to the proscriptive norms, their buying impulsiveness traits was less likely to predict their followed buying behaviours when they were exposed to proscriptive norms. Thus, the results of study 1 suggested that consumers' responses to social norms can influence the relationship between their general impulsiveness traits and the buying decisions under a particular buying situation.

In summary, the results from study 1 showed that the consumers' impulsiveness traits and their buying decisions were significantly related in the prescriptive group ($r = 0.626$, $p = 0.000$; $t = -0.177$, $p > 0.10$). This means consumers who have been exposed to the social norms that approve Mary's buying behaviour, were also more likely to make a buying

decision with a higher level of impulsiveness (H1a). However, in the proscriptive group, the relationship between consumers' impulsiveness traits and buying decisions was not significant ($r = 0.091$, $p > 0.10$; $t = 10.393$, $p = 0.000$), that confirmed the hypothesis of when consumers were influenced by proscriptive norms, there was no relationship between their impulsiveness traits and buying decisions (H1b). What is more, the results of the relationship between consumers' impulsiveness traits and buying decisions in the control group ($t = 0.462$, $p < 0.01$; $t = 0.998$, $p > 0.10$) supported the idea that the effect of social norms on trait-behavior relation was not linear, the consumer's impulsiveness trait might be most likely to express himself or herself in a final impulsive buying decision when that buying behavior was approved by the social norms under a specific situation.

Followed study one, a second study was designed to investigate social norms' effect on consumers' impulsive buying more comprehensively, by further divided social norms into descriptive norms and injunctive norms.

5.5 Testing different social norms' effect on impulse buying in study two

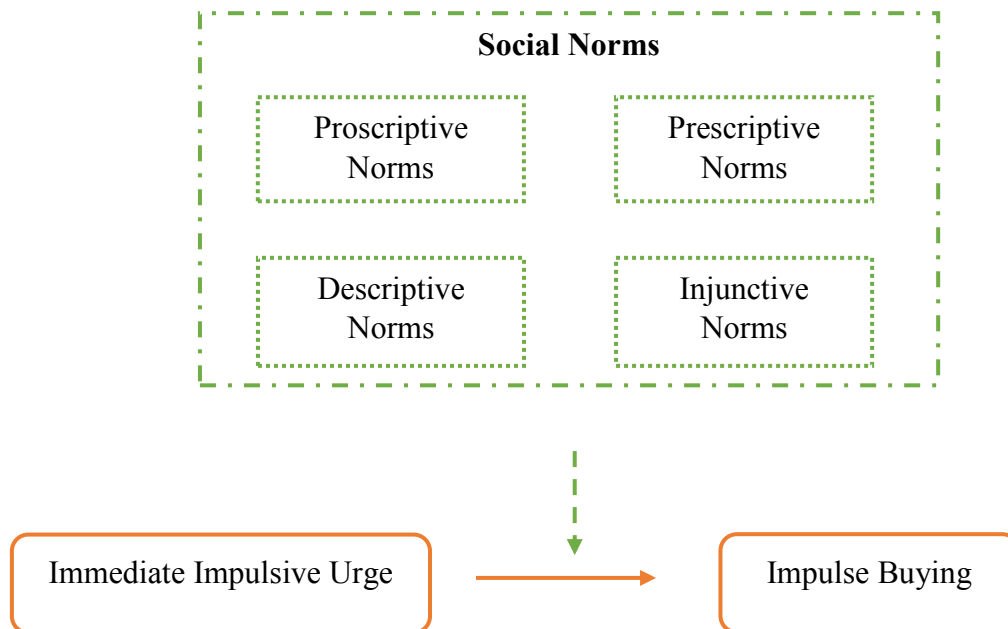


Figure 5.3 The conceptual Framework of study two

5.5.1 Respondents profile

As the same as in study one, all the experimental data have been collected from respondents with a varying education level from undergraduate (32.6%), postgraduate (34.8%), postgraduate research (22%), to others (it might include all other education levels excepted undergraduate, postgraduate and postgraduate research) (10.6%) (Table 5.12). And 47.7% respondents were male (63 out of 132), while 52.3% were female (69 out of 132) (Table 5.13).

Table 5.12 The distribution of subjects by the education level

| Education level | Frequency | Percent (%) |
|-----------------------|-----------|-------------|
| Undergraduate | 43 | 32.6 |
| Postgraduate | 46 | 34.8 |
| Postgraduate research | 29 | 22 |
| Others | 14 | 10.6 |
| Total | 132 | 100.0 |

Table 5.13 The distribution of subjects by gender

| Gender | Frequency | Percent (%) |
|--------|-----------|-------------|
| Male | 63 | 47.7 |
| Female | 69 | 52.3 |
| Total | 132 | 100.0 |

5.5.2 Manipulation checks for study two

Manipulation Checks

- *Sample's validity*

The same as the sample's validity check process which was used in study one, participants were asked to answer two verification questions in the end of the experiments: one was designed to confirm the participants had recognized the normative information from the scenarios (Q 3), another was designed to confirmed they had received the correct normative information from the scenarios (Q 4).

For question 3, the participants who chose the answer of ‘No’ were excluded from the valid data. For question 4, the participants who chose 1 (strongly disagree), 2 (disagree) and 3 (somewhat disagree) in the prescriptive groups (scenario 3 and scenario 4); and who chose 5 (somewhat agree), 6 (agree), and 7 (strongly agree) in the proscriptive groups (scenario 1 and scenario 2) were omitted from the final data analysis as invalid data. Finally, 7 participants who gave inappropriate answers to these two questions were omitted from the data analysis in study two.

- *Experiment design’s validity*

The experiment in study two was designed to investigate the different social norms’ effect on consumers’ impulse buying behaviour with a 2 (prescriptive social norms, proscriptive social norm) \times 2 (descriptive social norms, injunctive social norms) design. In order to test whether the experiments were designed successfully to deliver the correct normative information, a One-Way ANOVA was conducted to test the difference on impulsive urge and buying decisions between groups.

The ANOVA’s results confirmed that the experiment was designed successfully, as there was a significant difference in consumers’ impulsive urge between prescriptive group and proscriptive group, $F(1, 99) = 19.390, p = 0.000$; and a similar result was found for the buying decisions in those two experiment groups, $F(1, 99) = 29.382, p = 0.000$ (Table 5.14) (see details in Appendix 5.17).

Table 5.14 The One-way ANOVA on consumers' impulsive urge and buying decisions between proscriptive group and prescriptive group

| | | Sum of squares | df | Mean square | F | Sig. | Levene statistic sig. |
|------------------|----------------|----------------|-----|-------------|--------|-------|-----------------------|
| Impulsive urge | Between groups | 31.993 | 1 | 31.993 | 19.390 | 0.000 | 0.224 |
| | Within groups | 163.347 | 99 | 1.650 | | | |
| | Total | 195.340 | 100 | | | | |
| Buying decisions | Between groups | 27.246 | 1 | 27.246 | 29.382 | 0.000 | 0.054 |
| | Within groups | 91.804 | 99 | 0.927 | | | |
| | Total | 119.050 | 100 | | | | |

Note: Significant level at the 0.01.

Because in study two, both the prescriptive groups and proscriptive groups were divided into two more subgroups dependent on how the social norms were delivered (descriptive norms and injunctive norms), then the difference of impulsive urge and buying decisions were further checked under descriptive group and injunctive group respectively.

The results of independent T-test on the difference between prescriptive group and proscriptive group under the condition of descriptive norms showed that both the impulsive urge ($t = -2.067, p < 0.05$) and buying decisions ($t = -2.419, p < 0.05$) between descriptive \times proscriptive group and descriptive \times prescriptive group were significant different from each other (Table 5.15). The results in Table 5.16 showed there was a significant difference between prescriptive group and proscriptive group within the condition of injunctive norms ($t = -4.13, p = 0.000; t = -5.24, p = 0.000$).

These significant differences on consumers' impulsive urge and buying decisions between groups confirmed that the different types of social norms and the delivery ways, as the experimental factors, were designed successfully (see details in Appendix 18).

Table 5.15 The independent T-Test on impulsive urge and buying decisions of prescriptive group and proscriptive group, under descriptive norms

| | Group (s) | N | Mean | t | df | Sig. (2 – tailed) |
|------------------|----------------------------|----|--------|--------|----|-------------------|
| Impulsive urge | Descriptive × Proscriptive | 26 | 3.5192 | -2.067 | 48 | 0.044 |
| | Descriptive × Prescriptive | 24 | 4.2500 | | | |
| Buying decisions | Descriptive × Proscriptive | 26 | 2.0769 | -2.419 | 48 | 0.019 |
| | Descriptive × Prescriptive | 24 | 2.7083 | | | |

Note: Significant level at the 0.05.

Table 5.16 The independent T – Test on impulsive urge and buying decisions of prescriptive group and proscriptive group, under injunctive norms

| | Group (s) | N | Mean | t | df | Sig. (2 – tailed) |
|------------------|---------------------------|----|--------|-------|----|-------------------|
| Impulsive urge | Injunctive * Proscriptive | 25 | 3.0400 | -4.13 | 49 | 0.000 |
| | Injunctive * Prescriptive | 26 | 4.5577 | | | |
| Buying decisions | Injunctive * Proscriptive | 25 | 1.8000 | -5.24 | 49 | 0.000 |
| | Injunctive * Prescriptive | 26 | 3.2308 | | | |

Note: Significant level at the 0.01.

The reliability check for the impulsive urge scale

The Cronbach's Alpha of the 4-items impulsive urge scale (Luo, 2005) which was used to test consumers' immediate impulsive urge confirmed the scales' reliability, the scale had an overall 0.800 Cronbach's Alpha ($\alpha = 0.744, 0.889, 0.865, 0.750$ in the four experiment groups; and $\alpha = 0.700$ in the control group) (Table 5.17) (see details in Appendix 5.19).

Table 5.17 The Cronbach's Alpha of impulsive urge scale in different groups

| Groups | N | N of Items | Cronbach's Alpha (α) |
|----------------------------|-----|------------|-------------------------------|
| Descriptive * Proscriptive | 26 | 4 | 0.744 |
| Descriptive * Prescriptive | 24 | 4 | 0.889 |
| Injunctive * Proscriptive | 25 | 4 | 0.865 |
| Injunctive * Prescriptive | 26 | 4 | 0.750 |
| Control | 31 | 4 | 0.700 |
| All Participants | 132 | 4 | 0.800 |

In summary, the group equivalence check on the participants' impulsive urge and buying decisions all confirmed the sample was no difference based on data collection's demographics factors (i.e. locations, weeks and gender). And the experimental design's validity also was confirmed by a significant ANOVA results on participants' impulsive urge ($F(1, 99) = 19.390$, $p = 0.000$) and buying ($F(1, 99) = 29.382$, $p = 0.000$). All these checks are important for the present research's main analysis as they confirmed that the different experimental results' between groups are not by those non-experimental factors, thus the experimental results would be more accurately.

5.5.3 The main findings of study two

Group Equivalence on demographics

- *The locations of data collection*

As the same as in study one, study two's experiment data had been collected separately from the main library of the University of Birmingham ($N = 63$), the Guild of Students ($N = 42$), Birmingham Business School ($N = 6$) and some other places ($N = 21$) in the University of Birmingham, such as the student center and the Muirhead Tower, etc. The One-Way ANOVA and Tukey have been conducted to check whether there has a significant difference

on the data between different locations. The results of One-Way ANOVA on impulsive urge depended on where the data has been collected showed that participants' impulsive urge has no significant difference ($F(3, 128) = 1.961, p > 0.10$) between different locations of where the data has been collected (see Appendix 5.11). And the post-hoc test (Tukey) also confirmed that there has no significant difference ($p > 0.10$ in every two locations' comparisons) between the data that were collected from different places (see details in Appendix 5.11).

After checked the group equivalence on participants' impulsive urge, the participants' buying decisions were also been checked by ANOVA and Tukey. No significant difference on participants' buying decisions between different data collection locations was found in One-Way ANOVA, $F(3, 128) = 0.704, p > 0.10$. The results of Tukey on the multiple comparisons on buying decisions between different data collection places also confirmed that there was no significant difference between the data which have been collected from different locations ($p > 0.10$ in every two locations' comparison) (see details in Appendix 5.12).

- *The weeks when data has been collected*

The experimental data that was used in study two had been collected in five weeks separately: week 1 ($N = 37$), week 2 ($N = 36$), week 3 ($N = 18$), week 8 ($N = 32$), week 9 ($N = 9$), totally 132 valid data were collected. The group equivalence was checked by the One-Way ANOVA and Tukey tests, and all the results confirmed the data collected during the five weeks were comparable.

The One-Way ANOVA's results indicated that the participants' impulsive urge has no significant difference between difference data collection time ($F(4, 127) = 1.072, p > 0.10$). And the post-hoc test (Tukey) also confirmed that there was no significant difference ($p >$

0.10 in every subgroups comparisons) between the data that were collected in different weeks (see details in Appendix 5.13). The buying decisions have no significant difference between different weeks both in the One-Way ANOVA and Tukey's test; $F(4, 127) = 0.721$, $p > 0.10$ ($p > 0.10$ for all comparisons between the three weeks) (see details in Appendix 5.14).

- *The participants' gender*

Both male student samples ($N = 63$) and female student samples ($N = 69$) were included in the experimental data analysis for study two. The One-Way ANOVA and independent T-test were conducted to check the group equivalence, the results from both ANOVA ($F(1, 130) = 0.259$, $p > 0.10$); and independent T-test ($t = -0.509$, $p > 0.10$) indicated that the data collected from male students and female students were comparable, and there was no significant difference between the two genders (see details in Appendix 5.15).

For the participants' buying decisions, both One-Way ANOVA and independent T-test's results showed that the data collected from male students and female students were comparable with no significant difference between them, $F(1, 130) = 0.143$, $p > 0.10$, $t = -0.378$, $p > 0.10$ (see Appendix 5.16).

Main findings

Based on the hypotheses of study one which were when consumers were influenced by prescriptive norms, there was a significant relationship between their general impulsiveness traits and buying decisions (H1a), but there was no relationship between their impulsiveness traits and buying decisions when the consumers were influenced by proscriptive norms (H1b); study two was designed to further investigate the different social norms' effects on

consumers' impulse buying behaviour with a 2 (prescriptive norms, proscriptive norms) \times 2 (descriptive norms, injunctive norms) experimental design.

There have two hypotheses in study two: one is the prescriptive norms can increase consumers' impulsive urge and the possibility of impulse buying, and this increase would be greater when the group in question was influenced by injunctive norms rather than by descriptive norms (H2a); another one is proscriptive norms can decrease consumers' impulsive urge and the buying decisions' impulsive level, and this decrease effect would be greater when the group in question was influenced by injunctive norms rather than by descriptive norms (H2b).

Both hypotheses have been confirmed in study two. Table 5.18 shows the means of consumers' impulsive urge and buying decisions' impulsive level in each experiment group, as well as the ones in the control group.

Table 5.18 The means of impulsive urge and buying decisions in the four experimental groups and the control group

| | | Prescriptive group | | Proscriptive group | |
|-------------------------|-------------------|---------------------------------------|-----------|--------------------|-----------|
| | | <i>Mean</i> | <i>SD</i> | <i>Mean</i> | <i>SD</i> |
| Impulsive urge | Injunctive group | 4.56* | 1.35 | 3.04* | 1.27 |
| | Descriptive group | 4.25* | 1.38 | 3.51* | 1.11 |
| | Control group | <i>Mean</i> = 4.15*, <i>SD</i> = 1.03 | | | |
| Buying decisions | Injunctive group | 3.23* | 1.10 | 1.80* | 0.81 |
| | Descriptive group | 2.71* | 1.04 | 2.07* | 0.79 |
| | Control group | <i>Mean</i> = 2.29*, <i>SD</i> = 0.82 | | | |

*. is significant at the 0.01 level.

The effect of prescriptive norms in the form of descriptive norms and injunctive norms

For the prescriptive group's results as showed on the left side of Table 5.18, as expected, in the prescriptive groups (injunctive \times prescriptive group; descriptive \times prescriptive group), prescriptive norms increased consumers' impulsive urge ($M = 4.41$ vs. 4.15) and buying decisions ($M = 2.98$ vs. 2.29) when compared with the control group. And these difference were greater in consumers' impulsive urge and buying decisions when the group in question was influenced by injunctive norms ($M = 4.56$ vs. 4.15 for urge; 3.23 vs. 2.29 for decisions) than by descriptive norms ($M = 4.25$ vs. 4.15 for urge; 2.71 vs. 2.29 for decisions).

For the impulsive urge, there was a difference of 0.41 units between the injunctive \times prescriptive group ($M = 4.56$) and the control group ($M = 4.15$); and for descriptive \times prescriptive group ($M = 4.25$), there was a difference of 0.10 units when compared with the control group' impulsive urge ($M = 4.15$). These results were consistent with the hypothesis of prescriptive norms can increase consumers' impulsive urge and buying decisions, and consumers would have a higher impulsive urge and buying decisions when they were influence by prescriptive norms in the form of injunctive norms, rather than in the form of descriptive norms (H2a).

For buying decisions, a 0.94 units difference had appear between the injunctive \times prescriptive group ($M = 3.23$) and the control group ($M = 2.29$); and there had a difference of 0.42 between descriptive \times prescriptive group ($M = 2.71$) and the control group ($M = 2.29$). These results confirmed that the consumers' impulsive urge and buying increased when they were influenced by prescriptive norms, and the increase would be greater when they were influence in the form of injunctive norms, rather than in the form of descriptive norms (H2b).

The effect of proscriptive norms in the form of descriptive norms and injunctive norms

For the proscriptive group's results as showed in the right side of Table 5.18, as expected, in the proscriptive groups (injunctive \times proscriptive group; descriptive \times proscriptive group), proscriptive norms decreased consumers' impulsive urge (*Mean* = 3.28 vs. 4.15) and buying decisions (*Mean* = 1.94 vs. 2.29) when compared with the control group. And these differences were greater in both consumers' impulsive urge and buying decisions when the group in question was influenced by injunctive norms (*Mean* = 3.04 vs. 4.15 for urge; 1.80 vs. 2.29 for decisions) rather than by descriptive norms (*Mean* = 3.51 vs. 4.15 for urge; 2.07 vs. 2.29 for decisions).

For impulsive urge, there was a difference of -1.11 units between the injunctive \times proscriptive group (*M* = 3.04) and the control group (*M* = 4.15); and for descriptive \times proscriptive group (*M* = 3.51), there was a difference of -0.64 units when compared with the control group' impulsive urge (*M* = 4.15). These results were consistent with the hypothesis of proscriptive norms can decrease consumers' impulsive urge and buying decisions, and the proscriptive norms' decreased effect on impulsive urge and buying decisions would be greater when the consumers have been influenced by in the form of injunctive norms, rather than in the form of descriptive norms (H2b).

For buying decisions, there was a difference of -0.49 units between the injunctive \times proscriptive group (*M* = 1.80) and the control group (*M* = 2.29); and a difference of -0.22 units also appeared between the descriptive \times proscriptive group (*M* = 2.71) and the control group (*M* = 2.29). These results confirmed that the consumers' impulsive urge and buying decisions would have a decrease when they were influenced by proscriptive norms, and that decrease effect would be greater when they were influenced in the form of injunctive norms, than in the form of descriptive norms (H2b).

The interactive effect of different social norms on impulse buying

Table 5.19 The summary of social norms' main effect and interactive effect in study 2

| | Main effect (prescriptive norms, proscriptive norms) | | Interactive effect (prescriptive norms, proscriptive norms) × (Injunctive norms, descriptive norms) | |
|-------------------------|---|-------|--|-------|
| | F | Sig. | F | Sig. |
| Impulsive urge | 9.259* | 0.000 | 4.038** | 0.047 |
| Buying decisions | 16.036* | 0.000 | 4.746** | 0.031 |

*. is significant at the 0.05 level.

** . is significant at the 0.05 level.

It was hypothesized in H2 that the prescriptive norms would increase participants' immediate impulsive urge to buy but the proscriptive norms would decrease this urge. Moreover, this difference should be greater when the group had been exposed to injunctive norms than when it was not (descriptive norms). This was resulted in ANOVA as shown below.

Table 5.20 The One-Way ANOVA on impulsive urge and buying decisions on prescriptive group, prescriptive group and the control group

| | | Sum of squares | df | Mean square | F | Sig. | Levene statistic sig. |
|------------------|----------------|----------------|-----|-------------|---------|-------|-----------------------|
| Impulsive urge | Between groups | 28.293 | 2 | 14.146 | 9.259* | 0.000 | 0.110 |
| | Within groups | 197.099 | 129 | 1.528 | | | |
| | Total | 225.392 | 131 | | | | |
| Buying decisions | Between groups | 27.893 | 2 | 13.946 | 16.036* | 0.000 | 0.124 |
| | Within groups | 112.191 | 129 | 0.870 | | | |
| | Total | 140.083 | 131 | | | | |

*. is significant level at the 0.01.

As expected, participants reported a greater impulsive urge when they were influenced by prescriptive norms ($M = 4.41$), and less impulsive urge to buy when they were influenced by proscriptive norms ($M = 3.28$), than did the control group ($M = 4.15$), $F(2, 129) = 9.259$, $p = 0.000$ (the upper half in Table 5.20). As the data in Table 5.44 indicated, however, the effect of the types of social norms was appreciably greater when the group had been exposed to injunctive norms (4.56 vs. 3.04 for prescriptive norms group and proscriptive group respectively) than when the group had been influenced by descriptive norms (4.25 vs. 3.51, respectively). This conclusion was confirmed by a significant interaction of the types of social norms and the different ways to deliver it under the experimental conditions, $F(1, 130) = 4.038$, $p < 0.05$ (Table 5.21) (see Appendix 5.20).

Table 5.21 The two-way ANOVA on the between-subjects effects of (prescriptive, proscriptive) \times (descriptive, injunctive) norms on impulsive urge

| | Source | Sum of squares | df | Mean square | F | Sig. | Levene statistic sig. |
|----------------|--------------------------------------|----------------|-----|-------------|----------|-------|-----------------------|
| Impulsive urge | Corrected model | 35.222 | 4 | 8.805 | 5.881 | 0.000 | 0.177 |
| | Intercept | 2036.329 | 1 | 2036.329 | 1359.911 | 0.000 | |
| | PreProControl | 26.659 | 1 | 26.659 | 17.803 | 0.000 | |
| | DesInjControl | 0.835 | 1 | 0.835 | 0.557 | 0.457 | |
| | PreProControl \times DesInjControl | 6.046 | 1 | 6.046 | 4.038* | 0.047 | |
| | Total | 2287.688 | 132 | | | | |
| | Corrected total | 225.392 | 131 | | | | |
| | | | | | | | |

*. is significant at the 0.05 level.

(Note: PreProControl means prescriptive norms, proscriptive norms and the control group; DesInjControl means descriptive norms, injunctive norms and the control group)

The effect of experimental variables on the imagined likelihood of impulsive buying decisions were very similar. As shown in the bottom half of Table 5.18, participants reported

a greater urge to do the impulsive buying when they have been influence by prescriptive norms ($M = 2.98$), and less impulsive urge when they were influenced by proscriptive norms ($M = 1.94$), than they did in control group ($M = 2.29$), $F(2, 129) = 16.036$, $p = 0.000$ (the bottom half in Table 5.20). However, this difference was much greater when the group was exposed to injunctive norms ($M = 3.23$ vs. 1.80 for prescriptive norms group and proscriptive group respectively) than to descriptive norms ($M = 2.71$ vs. 2.07, respectively). This conclusion was also confirmed by a significant interaction of the types of social norms and the different ways to deliver it under the experimental conditions, $F(1, 130) = 4.746$, $p < 0.05$ (Table 5.22).

Table 5.22 The two-way ANOVA on the between-subjects effect of (prescriptive, proscriptive) \times (descriptive, injunctive) norms on buying decisions

| | Source | Sum of squares | df | Mean square | F | Sig. | Levene statistic sig. |
|------------------|--------------------------------------|----------------|-----|-------------|---------|-------|-----------------------|
| Buying decisions | Corrected model | 32.276 | 4 | 8.069 | 9.506 | 0.000 | 0.091 |
| | Intercept | 748.865 | 1 | 748.865 | 882.187 | 0.000 | |
| | PreProControl | 26.815 | 1 | 26.815 | 31.589 | 0.000 | |
| | DesInjControl | 0.380 | 1 | 0.380 | 0.448 | 0.505 | |
| | PreProControl \times DesInjControl | 4.029 | 1 | 4.029 | 4.746* | 0.031 | |
| | Total | 911.000 | 132 | | | | |
| | Corrected total | 140.083 | 131 | | | | |

*. is significant at the 0.05 level.

(Note: PreProControl means prescriptive norms, proscriptive norms and the control group; DesInjControl means descriptive norms, injunctive norms and the control group)

In summary, this study confirmed that the prescriptive norms have an increased effect on consumers' impulsive urge and buying decisions as hypothesized (H2a), and proscriptive norms have decreased effect on consumers' impulsive urge and buying decisions (H2b).

Moreover, the interactive effect of social norms' delivery ways (descriptive norms or injunctive norms) with prescriptive and proscriptive norms also has been confirmed. As expected, consumers reported a higher impulsive urge and the likelihood to buy impulsively when they were influenced by prescriptive \times injunctive norms than by prescriptive \times descriptive norms; while, consumers reported a lower impulsive urge and the likelihood to behave an impulsive buying when they were influenced by proscriptive \times injunctive norms than by proscriptive \times descriptive norms. That means social norms have its greatest increased effect on consumers' impulsive buying in the form of prescriptive \times injunctive, and have the greatest decreased effect on impulsive buying in the form of proscriptive \times injunctive.

Based on these findings, a third study was designed to investigate how consumers' self-construal can further influence the social norms' effect on their impulsive buying behaviour.

5.6 Testing how self-construal can further influence social norms' effect on impulse buying in study three

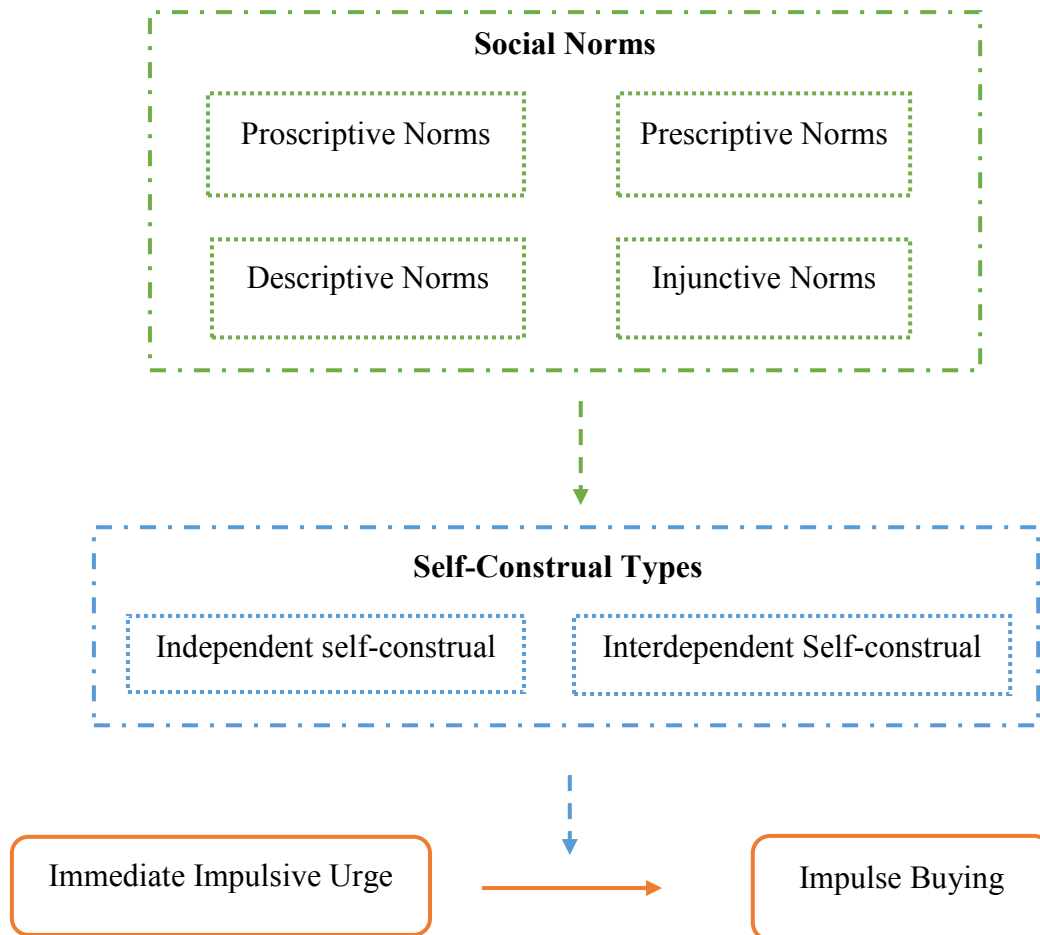


Figure 5.4 The conceptual framework of study three

5.6.1 Respondents profile

As the same with the two previous studies, all the experimental data were collected from respondents in the University of Birmingham with a varying education level: 38 of them were undergraduate students (32.8%), 48 of them were postgraduate students (41.4%), 19 of them were postgraduate researcher (16.4%), and 11 of them were from others education levels (9.5%), such as the foundation programme students, etc. (Table 5.48). And 50.9%

respondents were male (59 out of 116), while 49.1% were female (57 out of 116) (Table 5.49).

Table 5.23 The distribution of subjects by the education level

| Education level | Frequency | Percent (%) |
|-----------------------|-----------|-------------|
| Undergraduate | 38 | 32.8 |
| Postgraduate | 4 | 41.4 |
| Postgraduate research | 19 | 16.4 |
| Others | 11 | 9.5 |
| Total | 116 | 100.0 |

Table 5.24 The distribution of subjects by gender

| Gender | Frequency | Percent (%) |
|--------|-----------|-------------|
| Male | 59 | 50.9 |
| Female | 57 | 49.1 |
| Total | 116 | 100.0 |

5.6.2 Manipulation checks for study three

Manipulation Checks

- *Sample's validity*

The same data screening process was used in study three, participants were asked to answer two verification questions at the end of the experiments (Q3 and Q4), and those two questions were used to check whether the participants were manipulated successfully by the experimental factors in the scenarios. The participants who gave inappropriate answers to Q 3 and Q 4 were omitted from the final data analysis as invalid data. Finally, 15 participants with inappropriate answers were omitted from the data analysis in study three.

- *Experiment design's validity*

The experiment in study three was designed to investigate the interactive effect of social norms on consumers' impulse buying behaviour under different types of self-construal with a 2 (prescriptive social norms, proscriptive social norms) \times 2 (descriptive social norms, injunctive social norms) \times 2 (dependent self-construal, independent self-construal) design. In order to test whether the experiments were designed successfully to deliver the correct normative information, the main effect of different social norms, the interactive effect of different types of social norms with the different ways to deliver them, the interactive effect of different types of social norms with self-construal, and their three-way interactive effect were checked in ANOVA, the results were stated in details in Section 5.6.3.

Because study three was designed to further investigate the interactive effect of self-construal with different social norms on impulse buying, the prescriptive groups and proscriptive groups had two subgroups depended on how the social norms was delivered (descriptive norms or injunctive norms), then the groups were further divided into two parts based on the consumers' different types of self-construal. The impulsive urge and buying decisions' differences between prescriptive group and proscriptive group under descriptive norms or injunctive norms were further checked respectively.

The results of independent T-test on consumers' impulsive urge ($t = 3.798, p = 0.000$) and buying decisions ($t = 2.054, p < 0.05$) showed there was a significant difference between descriptive \times proscriptive group and descriptive \times prescriptive group (Table 5.25). The results in Table 5.26 shows there was also a significant difference between prescriptive group and proscriptive group with the condition of injunctive norms ($t = 11.270, p = 0.000$; $t = 6.250, p = 0.000$).

These significant differences on consumers' impulsive urge and buying decisions between groups confirmed that the different types of social norms and the deliver ways, as the experimental variables were designed successfully.

Table 5.25 The independent T-Test on impulsive urge and buying decisions of prescriptive group and proscriptive group, under descriptive norms: study 3

| | Group (s) | N | Mean | t | df | Sig. (2 – tailed) |
|------------------|----------------------------|----|--------|---------|----|-------------------|
| Impulsive urge | Descriptive * Proscriptive | 29 | 3.3534 | 3.798* | 56 | 0.000 |
| | Descriptive * Prescriptive | 29 | 4.1121 | | | |
| Buying decisions | Descriptive * Proscriptive | 29 | 2.0690 | 2.054** | 56 | 0.045 |
| | Descriptive * Prescriptive | 29 | 2.4138 | | | |

*, is significant at the 0.01 level.

**, is significant at the 0.05 level.

Table 5.26 The independent T-Test on impulsive urge and buying decisions of prescriptive group and proscriptive group, under injunctive norms: study 3

| | Group (s) | N | Mean | t | df | Sig. (2 – tailed) |
|------------------|---------------------------|----|--------|---------|----|-------------------|
| Impulsive urge | Injunctive * Proscriptive | 29 | 2.3879 | 11.270* | 56 | 0.000 |
| | Injunctive * Prescriptive | 29 | 4.8017 | | | |
| Buying decisions | Injunctive * Proscriptive | 29 | 1.7586 | 6.250* | 56 | 0.000 |
| | Injunctive * Prescriptive | 29 | 2.9655 | | | |

*, is significant level at the 0.01.

The reliability check for the impulsive urge scale

The 4-items impulsive urge scale (Luo, 2005) was used in study three to measure the consumers' immediate impulsive urge under the current buying situations. The scale had an

overall 0.87 Cronbach's Alpha, and all the Cronbach's Alpha in the sub-groups also confirmed the scale's reliability ($\alpha = 0.54, 0.78, 0.72, 0.77$ in the four sub-groups with dependent self-construal; $\alpha = 0.75, 0.66, 0.64, 0.63$ in the four sub-groups with independent self-construal) (Table 5.27).

Table 5.27 The Cronbach's Alpha of impulsive urge scale in different groups: study 3

| Groups | | N | N of Items | Cronbach's Alpha (α) |
|----------------------------|----------------------------|-----|------------|-------------------------------|
| Dependent self-construal | Proscriptive * Descriptive | 14 | 4 | 0.536 |
| | Proscriptive * Injunctive | 15 | 4 | 0.781 |
| | Prescriptive * Descriptive | 14 | 4 | 0.721 |
| | Prescriptive * Injunctive | 14 | 4 | 0.767 |
| Independent self-construal | Proscriptive * Descriptive | 15 | 4 | 0.748 |
| | Proscriptive * Injunctive | 14 | 4 | 0.659 |
| | Prescriptive * Descriptive | 15 | 4 | 0.639 |
| | Prescriptive * Injunctive | 15 | 4 | 0.629 |
| All Participants | | 116 | 4 | 0.870 |

In summary, all the previous checks confirmed these non-experimental demographics factors (i.e. locations, weeks and gender) have no effect on the research's results. And the experimental design's validity also was confirmed by a significant T-test results between prescriptive group and proscriptive group on participants' impulsive urge ($t = 3.798, p = 0.000$ for descriptive sub-group; $t = 11.270, p = 0.000$ for injunctive sub-group) and buying ($t = 2.054, p < 0.05$ for descriptive sub-group; $t = 6.250, p = 0.000$ for injunctive sub-group). All these checks are important for the present research's main analysis as they confirmed that the different experimental results' between groups are not by those non-experimental factors, thus the experimental results would be more accurately.

5.6.3 The main findings of study three

Group Equivalence on demographics

- *The locations of data collection*

The data used in study three were collected in the University of Birmingham, data collection places included the main library of the University of Birmingham ($N = 39$), the Guild of Students ($N = 32$), the gym ($N = 12$), Birmingham Business School ($N = 16$) and some other places ($N = 17$) in the University of Birmingham, such as the student center and Aston Webb, etc. The group equivalence was checked by One-Way ANOVA and Tukey, and both results confirmed that the data which had been collected from different locations were comparable, with no difference between each other. The results of One-Way ANOVA on impulsive urge depended on where the data were collected showed that participants' impulsive urge has no significant difference ($F(4, 111) = 0.742, p > 0.10$) between different locations. And the post-hoc test (Tukey) also confirmed that the data has no significant difference ($p > 0.10$ in every two locations' comparisons) between different locations (see details in Appendix 5.21). As the same for impulsive urge, the participants' buying decisions also were checked by ANOVA and Tukey. No significant difference on participants' buying decisions between different data collection locations was found in One-Way ANOVA, $F(4, 111) = 0.707, p > 0.10$ and Tukey's test ($p > 0.10$ in every two locations' comparison) (see details in Appendix 5.22).

- *The weeks when data has been collected*

The study three's data collection process was finished in two weeks: 65 data were collected in week 1, and another 51 data were collected in week 2, totally 116 valid data were collected.

Because there only had two groups (week 1 and week 2), so the group equivalence was checked by the One-Way ANOVA and T-tests, and all the results confirmed the data collected during the two weeks were comparable. The One-Way ANOVA's results indicated that the participants' impulsive urge has no significant difference between difference data collection time, $F(1, 114) = 0.404, p > 0.10$. And the T-test's results showed that there was no significant difference ($t = 0.64, p > 0.10$) between the data that were collected in those two weeks (see details in Appendix 5.23). For the consumers' buying decisions, no significant difference was found between these two weeks, $F(1, 114) = 1.112, p > 0.10$ from ANOVA. And the results of independent T-test also confirmed that the data has no significant difference between these two weeks, $t = 1.054, p > 0.10$ (see details in Appendix 5.24).

- *The participants' gender*

The valid data that were used in study three included both male student samples ($N = 59$) and female student samples ($N = 57$) which were collected in the University of Birmingham. The One-Way ANOVA and independent T-test were conducted to check the group equivalence, the results from both ANOVA and independent T-test indicated that the data collected from male students and female students were comparable, and there has no significant difference between the two gender, $F(1, 114) = 1.016, p > 0.10, t = 1.008, p > 0.10$ (See details in Appendix 5.25). For the participants' buying decisions, both One-Way ANOVA and independent T-test's results showed that the data collected from male students and female students were comparable with no significant difference between them, $F(1, 114) = 0.843, p > 0.10, t = 0.918, p > 0.10$ (see Appendix 5.26).

Main findings

Study three was designed to further investigate the different social norms' effect on impulse buying, under the different types of self-construal. A 2 (prescriptive norms, proscriptive norms) \times 2 (descriptive norms, injunctive norms) \times 2 (dependent self-construal, independent self-construal) experimental design was used in this study, and based on the previous two studies, I hypothesized that the prescriptive norms would have an increased effect on consumers' impulsive urge and buying decisions, and this effect would be greater when the social norms are delivered in the form of injunctive norms than descriptive norms, and the effect would be greater for the consumers with a dependent self-construal than independents (H3a); while, the proscriptive norms' decreased effect on consumers' impulsive urge and buying decisions would be greater when the social norms are delivered in the form of injunctive norms than descriptive norms, and the effect also would be greater to the consumers with dependent self-construal than independents (H3b).

The results of consumers' immediate impulsive urge under the different scenarios are summarized in the top half of Table 5.28 as a function of the information types that the social norms deliver (e.g., prescriptive norms, etc.), the ways that social norms delivery the information (e.g., descriptive norms, etc.), and the participants' activated self-construal types during the experiments (e.g., dependent self-construal, etc.); the effect of experimental variables on the consumers' buying decisions are shown in the bottom half of Table 5.28 as below.

Table 5. 28 The means of impulsive urge and buying decisions in the experiment groups and the control group

| Self-construal | Dependent | | | | Independent | | | |
|-------------------------|--------------------|-----------|--------------------|-----------|--------------------|-----------|--------------------|-----------|
| | Prescriptive norms | | Proscriptive norms | | Prescriptive norms | | Proscriptive norms | |
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| Impulsive urge | | | | | | | | |
| Descriptive norms group | 4.21* | 0.75 | 3.41* | 0.52 | 4.02* | 0.57 | 3.30* | 1.08 |
| Injunctive norms group | 5.38* | 0.86 | 2.05* | 0.56 | 4.27* | 0.53 | 2.75* | 0.71 |
| Buying decisions | | | | | | | | |
| Descriptive norms group | 2.43* | 0.64 | 2.21* | 0.69 | 2.40* | 0.50 | 2.27* | 0.79 |
| Injunctive norms group | 3.43* | 0.75 | 1.67* | 0.61 | 2.53* | 0.51 | 1.86* | 0.77 |

*. is significant at the 0.01 level.

The interactive effect of prescriptive norms with descriptive norms and injunctive norms

As expected, in study 3, in the prescriptive norms groups, consumers' immediate impulsive urge to purchase were greater when participants were exposed to injunctive norms ($M = 4.80$) than when they were influenced by descriptive norms ($M = 4.11$) (Table 5.29). The consumers' buying decisions showed a similar results with the impulsive urge in the prescriptive groups (prescriptive \times injunctive group, prescriptive \times descriptive group): the consumers' impulsive buying was greater they were influenced by injunctive norms ($M = 2.97$) than descriptive norms ($M = 2.41$) (Table 5.30).

Table 5.29 The mean of consumers' impulsive urge in the prescriptive group, in the form of injunctive norms and descriptive norms respectively: study 3

Dependent variable: Impulsive urge

| Groups | N | Minimum | Maximum | Mean | Std. Deviation |
|--|----|---------|---------|--------|----------------|
| Prescriptive norms × injunctive norms | 29 | 3 | 6.50 | 4.8017 | 0.89737 |
| Prescriptive norms × descriptive norms | 29 | 2.75 | 5.50 | 4.1121 | 0.66341 |

Table 5.30 The mean of consumers' buying decisions in the prescriptive group, in the form of injunctive norms and descriptive norms respectively: study 3

Dependent variable: Buying decisions

| Groups | N | Minimum | Maximum | Mean | Std. Deviation |
|--|----|---------|---------|------|----------------|
| Prescriptive norms × injunctive norms | 29 | 2 | 5 | 2.97 | 0.778 |
| Prescriptive norms × descriptive norms | 29 | 1 | 3 | 2.41 | 0.568 |

The interactive effect of prescriptive norms with different types of self-construal

The prescriptive norms' increased effect on consumers' immediate urge was greater when the participants in the group have dependent self-construal ($M = 4.79$) than the independent participants ($M = 4.14$) (Table 5.31). And when the consumers activated their dependent self-construal ($M = 2.93$), they would have a greater impulsive buying decisions than the consumers with independent self-construal ($M = 2.47$) (Table 5.32).

Table 5.31 The mean of consumers' impulsive urge in the prescriptive group, with different types of self-construal: study 3

Dependent variable: Impulsive urge

| Groups | N | Minimum | Maximum | Mean | Std. Deviation |
|--|----|---------|---------|--------|----------------|
| (Prescriptive norms × dependent) group | 28 | 3.00 | 6.50 | 4.7946 | 0.99316 |
| (Prescriptive norms × independent) group | 30 | 2.75 | 5.50 | 4.1417 | 0.55586 |

Table 5.32 The mean of consumers' buying decisions in the prescriptive group, with different types self-construal: study 3

Dependent variable: Buying decisions

| Groups | N | Minimum | Maximum | Mean | Std. Deviation |
|----------------------------------|----|---------|---------|------|----------------|
| Prescriptive norms × dependent | 28 | 1 | 5 | 2.93 | 0.858 |
| Prescriptive norms × independent | 30 | 2 | 3 | 2.47 | 0.507 |

The interactive effect of proscriptive norms with descriptive norms and injunctive norms

As expected, for the proscriptive norms groups, participants' immediate impulsive urge to purchase ($M=2.38$) were lower when the consumers were exposed to injunctive norms than when they were exposed to descriptive norms ($M = 3.35$) (Table 5.33); the results for the consumers' buying decisions in the prescriptive groups were very similar, the consumers who were influenced in the form of injunctive norms ($M = 1.76$) had a lower impulsive level in the buying decisions than the consumers who were influenced by proscriptive norms in the form of descriptive norms ($M = 2.24$) (Table 5.34).

Table 5.33 The mean of consumers' impulsive urge in the proscriptive group, in the form of injunctive norms and descriptive norms respectively: study 3

Dependent variable: Impulsive urge

| Groups | N | Minimum | Maximum | Mean | Std. Deviation |
|--|----|---------|---------|--------|----------------|
| Prescriptive norms × injunctive norms | 29 | 1 | 4.00 | 2.3879 | 0.72453 |
| Prescriptive norms × descriptive norms | 29 | 1.75 | 5.00 | 3.3534 | 0.84652 |

Table 5.34 The mean of consumers' buying decisions in the proscriptive group, in the form of injunctive norms and descriptive norms respectively: study 3

Dependent variable: Buying decisions

| Groups | N | Minimum | Maximum | Mean | Std. Deviation |
|--|----|---------|---------|------|----------------|
| Prescriptive norms × injunctive norms | 29 | 1 | 3 | 1.76 | 0.689 |
| Prescriptive norms × descriptive norms | 29 | 1 | 4 | 2.24 | 0.739 |

The interactive effect of proscriptive norms with different types of self-construal

The proscriptive norms' decreased effect on impulsive urge was greater to the dependent participants ($M = 2.71$) than to the independent participants ($M = 3.03$) (Table 5.35). And the consumers who hold dependent self-construal reported a lower impulsive level buying decisions ($M = 1.93$) than the consumers who hold independent self-construal ($M = 2.07$) (Table 5.36).

Table 5.35 The mean of consumers' impulsive urge in the proscriptive group, with different types of self-construal: study 3

Dependent variable: Impulsive urge

| Groups | N | Minimum | Maximum | Mean | Std. Deviation |
|----------------------------------|----|---------|---------|--------|----------------|
| Prescriptive norms × dependent | 29 | 1.00 | 4.00 | 2.7069 | 0.87645 |
| Prescriptive norms × independent | 29 | 1.25 | 5.00 | 3.0345 | 0.94898 |

Table 5.36 The mean of consumers' buying decisions in the proscriptive group, with different types self-construal: study 3

Dependent variable: Buying decisions

| Groups | N | Minimum | Maximum | Mean | Std. Deviation |
|----------------------------------|----|---------|---------|------|----------------|
| Prescriptive norms × dependent | 29 | 1 | 3 | 1.93 | 0.704 |
| Prescriptive norms × independent | 29 | 1 | 4 | 2.07 | 0.799 |

The interactive effect of different social norms and self-construal on impulse buying

Table 5.37 The summary of social norms' main effect and interactive effect in study three

| | Main effect | | Interactive effect | | | | | |
|-------------------------|--|-------|--|-------|---|-------|--|-------|
| | (prescriptive norms, proscriptive norms) | | (prescriptive norms, proscriptive norms) × (Injunctive norms, descriptive norms) | | (prescriptive norms, proscriptive norms) × self-construal | | prescriptive norms, proscriptive norms) × (Injunctive norms, descriptive norms) × self-construal | |
| | F | Sig. | F | Sig. | F | Sig. | F. | Sig. |
| Impulsive urge | 100.632* | 0.000 | 38.762* | 0.000 | 7.268* | 0.008 | 7.658* | 0.007 |
| Buying decisions | 25.193* | 0.000 | 15.909* | 0.000 | 4.945** | 0.028 | 4.067** | 0.046 |

*. is significant at the 0.01 level.

** is significant at the 0.05 level.

- The interactive effect on Impulsive urge

The types of social norms had a main effect on consumers' impulsive urge $F(1, 114) = 100.632, p = 0.000$ (Table 5.38), and the consumers' impulsive urge was greater when the participants' were influenced by the prescriptive norms ($M = 4.52$) than by the proscriptive norms ($M = 2.87$). Additionally, this difference was greater when the group was influenced by injunctive norms ($M = 4.80$ in prescriptive group vs. 2.39 in proscriptive group) than when it was influenced by descriptive norms ($M = 4.11$ in prescriptive group vs. 3.35 in proscriptive group).

Table 5.38 The One-Way ANOVA on impulsive urge in the prescriptive and proscriptive group

| | Source | Sum of squares | df | Mean square | F | Sig. | Levene statistic sig. |
|----------------|-----------------|----------------|----|-------------|----------|-------|-----------------------|
| Impulsive urge | Corrected model | 78.623 | 1 | 78.623 | 100.632 | 0.000 | 0.613 |
| | Intercept | 1586.560 | 1 | 1586.560 | 2030.699 | 0.000 | |
| | PrePro | 78.623 | 1 | 78.623 | 100.632* | 0.000 | |
| | Total | 1754.250 | 11 | | | | |
| | Corrected total | 167.690 | 11 | | | | |
| | | | 6 | | | | |
| | | | 5 | | | | |

*, is significant at the 0.01 level.

(Note: PrePro means prescriptive norms and proscriptive norms)

The two-way ANOVA showed the social norms' types and the ways to deliver them had an interactive effect on the consumers' impulsive urge, $F(1, 114) = 38.762, p = 0.000$ (Table 5.39). And the impulsive urge's difference between prescriptive norms and proscriptive norms also was greater among consumers who activated their dependent self-construal ($M = 4.79$ in prescriptive group vs. 2.71 in proscriptive group) than the consumers who activated independent self-construal ($M = 4.14$ in prescriptive group vs. 3.03 in proscriptive group),

this interactive effect was confirmed in the two-way ANOVA, $F(1, 114) = 7.268, p < 0.01$ (Table 5.40).

Table 5.39 The two-way ANOVA on the between-subjects effect of (prescriptive, proscriptive) \times (descriptive, injunctive) norms on impulsive urge

| | Source | Sum of squares | df | Mean square | F | Sig. | Levene statistic sig. |
|----------------|------------------------|----------------|-----|-------------|----------|-------|-----------------------|
| Impulsive urge | Corrected model | 101.625 | 3 | 33.875 | 57.429 | 0.000 | 0.449 |
| | Intercept | 1586.560 | 1 | 1586.560 | 2689.710 | 0.000 | |
| | PrePro | 78.623 | 1 | 78.623 | 133.290* | 0.000 | |
| | DesInj | 0.138 | 1 | 0.138 | 0.234 | 0.630 | |
| | PrePro \times DesInj | 22.864 | 1 | 22.864 | 38.762* | 0.000 | |
| | Total | 1754.250 | 116 | | | | |
| | Corrected total | 167.690 | 115 | | | | |

*. is significant at the 0.01 level.

(Note: PrePro means prescriptive norms and proscriptive norms; DesInj means descriptive norms and injunctive norms)

Table 5.40 The two-way ANOVA on the between-subjects effect of (prescriptive, proscriptive) \times self-construal on impulsive urge

| | Source | Sum of squares | df | Mean square | F | Sig. | Levene statistic sig. |
|----------------|------------------------|----------------|-----|-------------|----------|-------|-----------------------|
| Impulsive urge | Corrected model | 84.299 | 3 | 28.100 | 37.740 | 0.000 | 0.052 |
| | Intercept | 1589.522 | 1 | 1589.522 | 2134.85 | 0.000 | |
| | PrePro | 79.447 | 1 | 79.447 | 106.704* | 0.000 | |
| | IndDep | 0.266 | 1 | 0.266 | 0.358 | 0.551 | |
| | PrePro \times IndDep | 5.411 | 1 | 5.411 | 7.268* | 0.008 | |
| | Total | 1754.250 | 116 | | | | |
| | Corrected total | 167.690 | 115 | | | | |

*. is significant at the 0.01 level.

(Note: PrePro means prescriptive norms and proscriptive norms; IndDep means independent self – construal and dependent self - construal)

Moreover, the result of the three-way interaction of the types of social norms (prescriptive norms, proscriptive norms), the ways of how to deliver social norms (descriptive norms, injunctive norms), and the types of self-construal (dependent self-construal, independent self-construal) also was significant, $F(1, 114) = 7.658, p < 0.01$ (Table 5.41) (see details in Appendix 5.27).

Table 5.41 The three-way ANOVA on the between-subjects effect of (prescriptive, proscriptive) \times (descriptive, injunctive) \times self-construal on impulsive urge

| | Source | Sum of squares | df | Mean square | F | Sig. | Levene statistic sig. |
|----------------|--|----------------|-----|-------------|----------|-------|-----------------------|
| Impulsive urge | Corrected model | 111.063 | 7 | 15.866 | 30.261 | 0.000 | 0.076 |
| | Intercept | 1591.643 | 1 | 1591.643 | 3035.636 | 0.000 | |
| | PrePro | 78.716 | 1 | 78.716 | 150.131* | 0.000 | |
| | IndDep | 0.365 | 1 | 0.365 | 0.695 | 0.406 | |
| | DesInju | 0.098 | 1 | 0.098 | 0.186 | 0.667 | |
| | PrePro \times IndDep | 5.007 | 1 | 5.007 | 9.550* | 0.003 | |
| | PrePro \times DesInj | 22.861 | 1 | 22.861 | 43.601* | 0.000 | |
| | IndDep \times DesInj | 0.051 | 1 | 0.051 | .0097 | 0.756 | |
| | PrePro \times IndDep \times DesInj | 4.015 | 1 | 4.015 | 7.658* | 0.007 | |
| | Total | 1754.250 | 116 | | | | |
| | Corrected total | 167.690 | 115 | | | | |

*. is significant at the 0.01 level.

(Note: PrePro means prescriptive norms and proscriptive norms; DesInj means descriptive norms and injunctive norms; IndDep means independent self-construal and dependent self-construal)

These results were attributable to the fact that the types of social norms (prescriptive norms and proscriptive norms) had the greatest effect for the consumers who had dependent self-construal, while the group was influenced by injunctive norms than under any other

condition. In other words, the consumers' immediate impulsive urge was the greatest in the prescriptive norms group, when the participants were exposed to injunctive norms, and when the participants activated their dependent self-construal ($M = 5.38$). In contrast, this impulsive urge was the smallest in the proscriptive norms group, when the consumers who had dependent self-construal were exposed to the injunctive norms ($M = 2.05$).

- *The interactive effect on Impulsive buying decisions*

The effect of experimental variables on the imagined likelihood of buying decisions were very similar with impulsive urge; the different types of social norms had a main effect on consumers' impulse buying: the likelihood of impulsive buying decision was greater when the consumers were influenced by the prescriptive norms ($M = 2.69$) than by the proscriptive norms ($M = 2.00$), $F(1, 114) = 25.193$, $p = 0.000$ (Table 5.42).

Table 5.42 The One-Way ANOVA on buying decisions in the prescriptive and proscriptive group

| | Source | Sum of squares | df | Mean square | F | Sig. | Levene statistic sig. |
|------------------|-----------------|----------------|-----|-------------|----------|-------|-----------------------|
| Buying decisions | Corrected model | 13.793 | 1 | 13.793 | 25.193 | 0.000 | 0.481 |
| | Intercept | 637.793 | 1 | 637.793 | 1164.941 | 0.000 | |
| | PrePro | 13.793 | 1 | 13.793 | 25.193* | 0.000 | |
| | Total | 714.000 | 116 | | | | |
| | Corrected total | 76.207 | 115 | | | | |

*. is significant at the 0.01 level.

(Note: PrePro means prescriptive norms and proscriptive norms)

And this difference on buying decisions was significantly greater when the group was influence by injunctive norms ($M = 2.97$ in prescriptive group vs. 1.76 in proscriptive group) than when it was influenced by descriptive norms ($M = 2.41$ in prescriptive group vs. 2.24

in proscriptive group), this interactive effect was confirm by the two-way ANOVA, $F(1, 114) = 15.909$, $p = 0.000$ (Table 5.43); and this difference between prescriptive group and proscriptive group also was greater when the consumers had dependent self- construal ($M = 2.93$ in prescriptive group vs. 1.93 in proscriptive group) than to the consumers who hold independent self-construal ($M = 2.47$ in prescriptive group vs. 2.07 in proscriptive group), $F(1, 114) = 4.945$, $p < 0.05$ (Table 5.44).

Table 5.43 The two-way ANOVA on the between-subjects effect of (prescriptive, proscriptive) \times (descriptive, injunctive) norms on buying decisions

| | Source | Sum of squares | df | Mean square | F | Sig. | Levene statistic sig. |
|------------------|------------------------|----------------|-----|-------------|----------|-------|-----------------------|
| Buying decisions | Corrected model | 21.586 | 3 | 7.195 | 14.754 | 0.000 | 0.677 |
| | Intercept | 637.793 | 1 | 637.793 | 1307.798 | 0.000 | |
| | PrePro | 13.793 | 1 | 13.793 | 28.283 | 0.000 | |
| | DesInj | 0.034 | 1 | 0.034 | 0.071 | 0.791 | |
| | PrePro \times DesInj | 7.759 | 1 | 7.759 | 15.909* | 0.000 | |
| | Total | 714.000 | 116 | | | | |
| | Corrected total | 76.207 | 115 | | | | |

*. is significant at the 0.01 level.

(Note: PrePro means prescriptive norms and proscriptive norms; DesInj means descriptive norms and injunctive norms)

Table 5.44 The two-way ANOVA on the between-subjects effect of (prescriptive, proscriptive) \times self-construal on impulsive urge

| | Source | Sum of squares | df | Mean square | F | Sig. | Levene statistic sig. |
|------------------|------------------------|----------------|-----|-------------|----------|-------|-----------------------|
| Buying decisions | Corrected model | 17.159 | 3 | 5.720 | 10.849 | 0.000 | 0.916 |
| | Intercept | 639.580 | 1 | 639.580 | 1213.133 | 0.000 | |
| | PrePro | 14.105 | 1 | 14.105 | 26.754* | 0.000 | |
| | IndDep | 0.760 | 1 | 0.760 | 1.442 | 0.232 | |
| | PrePro \times IndDep | 2.607 | 1 | 2.607 | 4.945** | 0.028 | |
| | Total | 714.000 | 116 | | | | |
| | Corrected total | 76.207 | 115 | | | | |

*. is significant at the 0.01 level.

**. is significant at the 0.05 level.

(Note: PrePro means prescriptive norms and proscriptive norms; IndDep means independent self-construal and dependent self-construal)

Moreover, the result of the three-way interaction of the types of social norms, the ways of how to deliver social norms, and the types of self-construal was significant, $F(1, 114) = 4.067$, $p < 0.05$ (Table 5.45) (see details in Appendix 5.28). This is attributable to the fact that the effect of the types of social norms (prescriptive norms vs. proscriptive norms) was greater when the group was influence by injunctive norms and the consumers activated their dependent self-construal than under any other condition. In other word, the consumers' immediate impulsive urge was the greatest in the prescriptive norms group, when the consumers were exposed to injunctive norms, while activated their dependent self-construal ($M = 3.43$). In contrast, this impulsive urge was the smallest in the proscriptive norms group when the social norms were delivered in the form of injunctive norms, and when the consumers had dependent self-construal ($M = 1.67$).

Table 5.45 The three-way ANOVA on the between-subjects effect of (prescriptive, proscriptive) \times (descriptive, injunctive) \times self-construal on impulsive urge

| | Source | Sum of squares | df | Mean square | F | Sig. | Levene statistic sig. |
|------------------|--|----------------|-----|-------------|----------|-------|-----------------------|
| Buying decisions | Corrected model | 27.678 | 7 | 3.954 | 8.800 | 0.000 | 0.904 |
| | Intercept | 639.524 | 1 | 639.524 | 1423.257 | 0.000 | |
| | PrePro | 14.049 | 1 | 14.049 | 31.265* | 0.000 | |
| | IndDep | 0.839 | 1 | 0.839 | 1.868 | 0.175 | |
| | DesInju | 0.056 | 1 | 0.056 | 0.125 | 0.724 | |
| | PrePro \times IndDep | 2.464 | 1 | 2.464 | 5.484** | 0.021 | |
| | PrePro \times DesInj | 7.911 | 1 | 7.911 | 17.607* | 0.000 | |
| | IndDep \times DesInj | 0.961 | 1 | 0.961 | 2.139 | 0.147 | |
| | PrePro \times IndDep \times DesInj | 1.828 | 1 | 1.828 | 4.067** | 0.046 | |
| | Total | 714.000 | 116 | | | | |
| | Corrected total | 76.207 | 115 | | | | |

*. is significant at the 0.01 level.

**. is significant at the 0.05 level.

(Note: PrePro means prescriptive norms and proscriptive norms; DesInj means descriptive norms and injunctive norms; IndDep means independent self-construal and dependent self-construal)

In summary, this study's findings provided evidence on how consumers' self-construal can further influence social norms' effect on impulsive buying. The main effect of social norms' types (prescriptive norms, proscriptive norms) on impulsive urge and impulsive buying were confirmed in this study as the same as in study one and study two, $F(1, 114) = 100.632$, $p = 0.000$ for impulsive urges, $F(1, 114) = 25.193$, $p = 0.000$ for impulse buying. Additionally, self-construal was confirmed has an interactive effect with social norms, on impulsive buying, a significant three-way interactive effect of the social norms types, ways of delivery and the self-construal's on impulsive buying ($F(1, 114) = 4.067$, $p < 0.05$) indicated that the

consumers' activated self-construal type can further influence the interactive effect of the social norms' types and ways of delivery on their impulse buying. As expected, when consumers were influenced by prescriptive norms, they would have a higher impulsive urge ($M = 4.80$) and likelihood to behave an impulsive buying ($M = 2.97$) when they were influence by injunctive norms than by descriptive norms (impulsive urge: $M = 4.11$; buying decision: $M = 2.41$); and that increase effect would be greater on dependent consumers (impulsive urge: $M = 4.79$; buying decision: $M = 2.93$) than on independent consumes (impulsive urge: $M = 4.14$; buying decision: $M = 2.47$) (H3a). While, when consumers were influenced by proscriptive norms, they would have a lower impulsive urge ($M = 2.39$) and likelihood to behave an impulsive buying ($M = 1.76$) when they were influence by injunctive norms than by descriptive norms (impulsive urge: $M = 3.35$; buying decision: $M = 2.24$); and that decrease effect would be greater on dependent consumers (impulsive urge: $M = 2.71$; buying decision: $M = 1.93$) than on independent consume (impulsive urge: $M = 3.03$; buying decision: $M = 2.07$) (H3b).

5.7 Summary

This chapter presented the analysed quantitative results of the three present experimental studies. As a result, the findings were consistent with the research hypotheses. Social norms have been shown to influence the relationship between impulsiveness and impulsive buying (Section 5.4). And a main effect of social norms' types (prescriptive norms, proscriptive norms) on consumers' impulsive buying were confirmed in study two and three; $F(1,130) = 31.589, p = 0.000, F(1, 114) = 25.193, p = 0.000$ for study two and three respectively (Section 5.5, 5.6).

A significant relationship between consumers' impulsiveness and impulsive buying has been found when they were influenced by prescriptive norms (H1a), but no significant relationship has been found between impulsiveness and impulsive buying when consumers were influenced by proscriptive norms (H1b). What is more, as predicted in H2a, H2b, H3a and H3b, the different types of social norms (prescriptive norms, proscriptive norms) not only have a main effect on consumers' impulsive urge and impulse buying decisions, but also have an interactive effect with the ways of how to deliver the social norms (descriptive norms, injunctive norms) on impulse buying; $F(1, 130) = 4.746, p < 0.05$, $F(1, 114) = 15.909, p = 0.000$ for study two and three respectively. And the self-construal has been identified can further influence social norms' effect on impulse buying, $F(1, 114) = 4.067, p < 0.05$. All these findings that generalised from the three experimental studies were consistent with the hypotheses, and indicated different social norms' effect on impulsive buying.

CHAPTER 6 DISCUSSION

6.1 Introduction

The aims of this chapter are to discuss how the present research meet the research objectives, and to make a comparison between the existing literature (Chapter 2) and the findings of the experiments (Chapter 5). This chapter also states the current research contributions (Section 6.4) to both the theoretical and practical aspects; followed by a discussion of the limitations of the present research (Section 6.5) and the direction for future research (Section 6.6). This chapter concludes with a summary of what this project has achieved (Section 6.7).

The three experiments were conducted and analysed in order to produce the experimental data. Subsequently the three research objectives, which are proposed in the Theoretical Framework Chapter (Chapter 3), can be met. The three research objectives are:

RO 1: To investigate whether social norms can influence the relationship between consumers' general impulsiveness and their impulse buying.

RO 2: To understand how different types of social norms can influence consumers' impulse buying differently.

RO 3: To examine how consumers' activated self-construal can further influence the social norms' effect on impulse buying.

The research questions will be answered and discussed in Sections 6.2, 6.3 and 6.4 respectively in connection to each of the 3 experimental studies. Firstly, the answers to the first research question will be discussed.

6.2 Discussion of study one and RO 1

This study has been designed to investigate the effect of social norms on the relationship between consumers' general impulsiveness traits and impulsive buying behaviours (RO 1). Participants were randomly assigned into one of the three sub-groups (two experimental groups and one control group). The researcher initially gave the participants a short explanation about the experiment and after they had signed the consent form, they were asked to rate a 9-items measurement, which aimed to measure their general impulsiveness levels in a 5-points Likert-scale format. After having one specific shopping scenario presented to them, the participants were asked to make a buying decision based on that shopping scenario and by imagining that they are 'Mary'; and finally, the participants were also asked to answer two questions for manipulation check purposes. Only the data collected from those deemed to be appropriate participants (e.g. current students from the University of Birmingham, having British nationality, who had signed the consent form and passed the manipulation checks) were considered as providing valid data for the analysis.

To ensure the collected data were comparable, several group equivalence checks were conducted and the data were analysed. The comparison of consumers' impulsiveness traits between the sub-groups (the prescriptive group, the proscriptive group and the control group) were presented earlier in Section 5.4.2, which shows that the participants' general impulsiveness traits have no significant difference between the three sub-groups; in other words, this indicates there was no specific participant in each of the three sub-groups, thus the general impulsiveness traits data, which was collected from the participants, is comparable.

Additionally, group equivalence on demographic factors (dependency location, weeks and gender) was also verified to ensure that those factors would not influence the results of the main data analysis. The comparisons of participants' impulsiveness traits and buying decisions were from the perspectives of the location of the collected data, time (on a weekly basis) and the participants' gender. The comparison results confirmed that the data were comparable as these demographic factors (location, weeks and gender) had no effect on the group's equivalence. After confirming the equivalence between groups, the researcher continued the main analysis.

In the main analysis, social norms were confirmed to have an effect on the relationship between consumers' general impulsiveness traits and their buying decisions: the trait-decision association in the prescriptive group was stronger than that in the control group; whilst no significant trait-decision association was found in the proscriptive group. In other words, compared with the control conditions, when consumers have been influenced by prescriptive social norms, the relationship between their general impulsiveness traits and buying decisions would be stronger, which means that prescriptive social norms have a positive effect on the impulsive trait-decision relationship; whilst when consumers have been influenced by proscriptive social norms, their impulsive trait-decision relationship would be weaker or would even show no significant relationship to exist, which means that proscriptive social norms have a negative effect on the relationship between consumers' impulsive trait and buying decisions.

The results are consistent with the hypotheses that are:

H1a: When consumers are influenced by prescriptive norms, a significant relationship appears between their buying impulsiveness traits and their subsequent impulse buying decisions;

H1b: When influenced by proscriptive norms, no significant relationship will appear between buying impulsiveness traits and subsequent impulse buying decisions.

The results of this study further support the argument of Rook and Fisher (1995), which states that impulse buying can be influenced by social factors, although this special, irrational buying behaviour always occurs suddenly and seemingly without any prior buying intention. The previous social norms' studies, in the area of consumer decision making, normally link rational behaviour, relying on the perspective taken by Fishbein's Reasoned Action Theory (Ajzen & Fishbein, 1977). But Rook and Fisher (1995) argued that although impulse buying behaviours always occur suddenly in a shopping situation without any prior intention to buy, in the temporal delay between the urge of buying impulsively and a final impulse buying decision, consumers are still feeling, thinking and evaluating various retail stimuli, even if just for a few seconds. Consumers may then experience normative encouragement or discouragement when buying impulsively strikes, regardless of whether the consumers rank this as low or high in their impulsiveness traits (Rook & Fisher, 1995). The present research results show that consumers with positive normative evaluations are more likely to act in a way that is consistent with their degree of impulsiveness, but there was no significant association between a consumer's impulsiveness traits and their buying decisions when they have a negative normative evaluation of their current buying behaviours (Kropp, et al., 1999; Amos, et al., 2014; Cunha & da Silva, 2015).

However, Rook and Fisher's (1995) research has some limitations, albeit that their research established that social norms can influence consumers' irrational behaviours, such as impulse buying. Rook and Fisher (1995) only studied how consumers' own normative evaluation towards impulsive buying can influence their buying decisions. They only studied

the effect of social factors from an individual level, leaving a gap in the collective normative evaluations' effect on impulsive buying behaviours.

The current study's results not only support Rook and Fisher's (1995) view that normative evaluation can influence impulse buying, but also fill the research gap as mentioned above: those consumers who were influenced by prescriptive social norms were more likely to act in a way that was consistent with the degree of their impulsiveness because they perceive encouragement from a collective social belief; thus they were more likely to behave in line with an immediate impulsive urge.

On the other hand, no significant association exists between the consumers' impulsiveness and buying decisions when they were influenced by proscriptive social norms, because these consumers perceived a strong normative warning against acting on impulse and feel that buying was not approved of by their society; although some consumers who have high impulsive urges might still impulse buy, whereas other consumers would resist the urge to buy when they receive social discouragement from the proscriptive social norms. Due to this potential variation in consumers' buying decisions, the prediction power of buying impulsiveness traits on behaviours becomes weaker, or was not significant, when consumers were influenced by proscriptive social norms.

In summary, the results of study one suggest that social norms can influence the link between traits and buying decisions. The overall correlation between participants' impulsiveness traits and buying decisions whilst significant, is not particularly strong because it includes normative components as influencing factors on the trait-decision relationship. Indeed, the association between trait and decision is considerably weaker when consumers have been influenced by proscriptive, social norms, and considerably stronger when consumers have been influenced by prescriptive social norms. These findings provide some support for the

social norms' effect on the relationship between impulsive traits and impulse buying that are line with Rook and Fisher's (1995) and Luo's (2005) arguments about the individual level's normative influences on impulsive buying. Additional evidence regarding how different social norms can influence impulse buying will be offered from a second study that draws on a combination of different aspects on social norms.

6.3 Discussion of study two and RO 2

Based on the results of study one, which confirmed social norms can influence the impulsive trait's prediction power on impulse buying behaviours, a second study has been designed to further investigate how different types of social norms can influence consumers' impulse buying (RO 2). Based on the 2 (prescriptive norms, proscriptive norms) * 2 (descriptive norms, injunctive norms) experimental design, participants were randomly allocated to one of the five sub-groups (four experimental groups and one control group). The researcher provided a short explanation of the experiment to the participants, they signed the consent form, and then a shopping scenario would be presented to them depending on which sub-group they were assigned. Using this shopping scenario, the participants were asked to rate the impulsive urge measurement on the 7-points Likert scale format and to make a buying decision by imagining that they are 'Mary'; the participants also were asked to answer two questions to ultimately check whether they were well manipulated.

Before moving on to the main analysis, the group equivalence was checked based on demographic factors (e.g. location, weeks and gender). The comparisons of participants' impulsive urges and buying decisions were dependent on the locations of the data collected, time (on a weekly basis) and the participant's all confirmed that the data are comparable as

these demographic factors (location, weeks and gender) had no effect on the group's equivalence. Now move to the main analysis.

As presented in Chapter 3, there are two hypotheses for study two, which are:

H2a: The prescriptive norms will increase the urge to purchase and the impulsive buying choice levels; these increased differences, however, will be greater when the group in question is influenced in the form of injunctive norms rather than in the form of descriptive norms.

H2b: The proscriptive norms will decrease the urge to purchase and the impulsive buying choice levels; these decreased differences, however, will be greater when the group in question is influenced in the form of injunctive norms rather than in the form of descriptive norms.

As expected, participants reported a greater urge to buy impulsively when they were influenced by prescriptive, social norms, and experienced less impulsive urges when they were influenced by proscriptive, social norms, than the control participants. However, the effect of different types of social norms is appreciably greater when the social norms are delivered in injunctive norms, than when they are not. This conclusion is further confirmed by a significant interaction of the social norms' type and the way it is delivered under experimental and control conditions.

The effect of experimental variables on imagined impulse buying decisions are very similar. Participants reported a greater likelihood of making an impulsive purchase when influenced by prescriptive, social norms, and are less likely to engage in impulse buying when influenced by proscriptive, social norms, than they were under control conditions. However, this difference is much greater when the social norms are delivered in the injunctive norms

format than when it is not. This conclusion is confirmed by a significant interaction of types of social norms and the style of delivery.

The main effect of the social norms' type on impulsive urges and buying decisions is further supported by study one's conclusion: the collective level's norms also have an effect on consumers' impulse buying behaviours. This conclusion also fills Rook and Fisher's (1995) research gap as they only studied the normative evaluation's effect on impulsive buying at the individual level, whereas the collective level's norms that would influence impulse buying was neglected. What is more, study two's results provided additional evidence on how different social norms can influence consumers' impulsive buying differently by investigating the effect in a 2 (prescriptive norms, proscriptive norms) * 2 (descriptive norms, injunctive norms) matrix. As hypothesized, the participants reported a greater urge to buy and were likely to make more highly impulsive level buying decisions when they were influenced by prescriptive * injunctive social norms; whilst consumers would have a less impulsive urge and were less likely to impulse buy when they were influenced by proscriptive * injunctive, social norms.

In summary, the results of study two further support the conclusion that collective norms can influence consumers' impulse buying; and the results also suggest that the different ways for delivering social norms can further influence the effect of different types of social norms on impulse buying. Indeed, the results also support Rook and Fisher's (1995) argument on Fishbein's Reasoned Action Theory (Ajzen & Fishbein, 1977) that although impulse buying is not a rational behaviour, social norms still have an impact on it (Kropp, et al., 1999; Luo, 2005; Zhang & Shrum, 2008; Amos, et al., 2014; Cunha & da Silva, 2015).

These findings provide some answers to RO 2 which is how different social norms' can influence impulse buying, additional evidence about how those influences would act

differently on different consumers will be explored using a third study that draws on a combination of social norms' characters and consumers' characters.

6.4 Discussion of study three and RO 3

The two previous studies investigated the effect of social norms on impulse buying based on the different aspects of social norms, and all the findings support the research hypothesis, which is that social norms can influence impulse buying. This third study was designed to get a better understanding of the social norms' effect on impulse buying, not only by investigating the effect according to on the differences of social norms', but also investigating the effect by classifying consumers into different groups depending on their activated self-construal.

This study was designed to investigate the effect of social norms on impulse buying, and how consumers' activated self-construal can further influence that effect (RO 3) by using the 2 (prescriptive norms, proscriptive norms) * 2 (descriptive norms, injunctive norms) * 2 (dependent self-construal, independent self-construal) experimental design, where the participants were randomly allocated to one of eight sub-groups. The researcher gave the participants a short explanation of the experiment and after the consent form were signed, the self-construal priming task was initiated: participants were primed to apply either independent self-construal or dependent self-construal according to which sub-group they belonged. Subsequently, the same experimental procedure was used here as in study two: under the buying scenario provided, participants were asked to rate each statement in the impulsive urge scale and to make buying decisions by imagining they are 'Mary', finally the participants were asked to answer two questions for manipulation check purposes.

The group equivalence check was also conducted in study three to make sure that the data would not be affected by demographic factors (location, weeks and gender) thus rendering the data as comparable. The comparison of participants' impulsive urges and buying decisions depended on the locations of the data collected, time (by week's basis) and the participant's gender confirmed that the data were comparable as the demographic factors (location, weeks and gender) had no effect on the group's equivalence. Now the main analysis can be conducted.

The two hypotheses for study three that were presented in Chapter 3 were confirmed by the findings. As expected, participants in the prescriptive groups reported a greater urge to buy impulsively and to make more impulse buying decisions when they were influenced by injunctive norms than descriptive norms, and that that effect was greater when social norms were expressed to the dependents rather than to the independents (H3a).

Whilst participants in the proscriptive groups reported less impulsive urges to buy impulsively when they were influenced by injunctive norms than descriptive norms, and that that effect was greater when social norms have been expressed to dependents rather than to the independents (H3b).

In other words, consumers have a greater urge to impulse buy when they were influenced by prescriptive norms than by proscriptive norms. Moreover, the effects of prescriptive norms and proscriptive norms were appreciably greater when the social norms were delivered in injunctive norms than in descriptive norms. The two-way ANOVA on social norms' types and the ways of delivery also confirmed this interactive effect. Additionally, a significant interactive effect between social norms' types and consumers' self-construal types was also confirmed; the prescriptive norms and proscriptive norms have a greater effect on dependent consumers' impulsive urges than on independent consumers. Furthermore, the three way

(social norms types, deliver ways, self-construal types) interactive effect was also significant. In summary, prescriptive norms would have the greatest positive effect on impulsive urges when they were expressed in the injunctive norms format to dependent consumers; whilst proscriptive norms would have the greatest negative effect on impulsive urges when they were delivered in the injunctive norms format to dependent consumers.

The effect of experimental variables on the imagined impulsive buying decisions were very similar to the impulsive urge. A greater likelihood of making an impulse buying decision was reported by the participants when they were exposed to prescriptive norms than to proscriptive norms. Additionally, this difference was much greater when the social norms were delivered in the injunctive norms format than in a descriptive norms format, this interactive effect was confirmed by significant ANOVA results. Moreover, the three-way interactive effect of social norms' types, ways of delivery and consumers' self-construal types was also significant. In summary, prescriptive norms would have the greatest positive effect on the likelihood of impulsive buying decisions when the norms were expressed in the injunctive norms format to dependent consumers; whilst proscriptive norms would have the greatest negative effect on impulsive urges when they were delivered in the injunctive norms format to dependent consumers.

The main effect of social norms' types on impulsive urges and buying decisions were further verified in study three. This effect shows that the norms from the collective level not only have an effect on people's rational decision-making process, but also on consumers' irrational buying behaviours-impulse buying. This conclusion was consistent with Rook and Fisher's (1995) argument regarding the normative evaluation's effect on impulsive buying, which was the consumers' normative evaluation of a specific buying behaviour would influence their impulse buying.

Additionally, this established social norms' effect on impulsive buying also fills in the research gap in Rook and Fisher's (1995) study on impulse buying, which focused solely on the investigation of the effect of consumers' own normative evaluations on impulse buying, but didn't consider how the collective level's normative evaluation can influence impulse buying. The current study also demonstrates the social norms' types and the ways of delivery on impulse buying, the social norms were identified as having a greater positive effect on consumers' impulse buying behaviours when the consumers were exposed to prescriptive norms in the injunctive way of delivery, and the proscriptive social norms, when expressed in an injunctive way, would have a greater negative effect on consumers' impulse buying.

Moreover, a significant three-way interactive effect of the social norms types, ways of delivery and the self-construal's on impulsive buying indicated that the consumers' activated self-construal type can further influence the interactive effect of the social norms' types and ways of delivery on their impulse buying. Self-construal's effect on impulse buying has been identified in previous research (Luo, 2005; Zhang & Shrum, 2008; Xiong & Jing, 2010; Verplanken & Sato, 2011), but the self-construal's effect has only been considered in relation to the negative side of impulse buying (i.e. alcohol purchase). This is a limitation because alcohol consumption has always been linked to negative outcomes (e.g., safety problems, health problems) and has been chosen as the impulse buying indicator by Zhang and Shrum (2008). The current study's findings fill that research gap and provide a more comprehensive understanding of the self-construal's effect on impulse buying in a more generic consumption context that can have both negative and positive outcomes. For example, buying sweater which contains fur accessories may cause negative outcomes (animal welfare), buying the sweater with a donation to the charity may cause positive outcomes (help others).

In summary, a significant main effect of different social norms on impulse buying is established in this study, and is consistent with the findings of study two. Additionally, the findings about the interaction effect of social norms types and ways of delivery, in study three, further supported the conclusion of study two, which sought to show how the different delivery ways for social norms can additionally influence the effect of different types of social norms on impulse buying. Moreover, compared to previous studies that investigated self-construal's effect on impulsive buying using problem drinking that should cause negative consequences as impulsive buying indicator (i.e. alcohol consumption in Zhang & Shrum (2008)), the present research used a normal buying behaviour that may cause either positive or negative consequences as the impulsive buying indicator. And when compared with previous studies (Heckler, et al., 1989; Abrams, et al., 2000; Baumeister, 2002; Luo, 2005; Liu & Laird, 2008; Opoku, 2012), which used the attitudes from peers as normative information, the current research examined the normative information come from the society as the influence body. Thus, the current research offers a more comprehensive investigation of the self-construal's effect on impulse buying and provides a broader understanding of the self-construal's influence power. The findings also provide a clearer and more comprehensive understanding on the effect of social norms on impulse buying.

In the following two sections, the current research's contributions to the theoretical and practical aspects will be discussed separately.

6.5 Research contributions

6.5.1 Theoretical contributions

This research was designed to help to extend the current knowledge in relation to impulse buying and the effects of different social norms on consumers' impulsive buying behaviours. The quantitative study was carried out as an empirical study into the role of social norms on impulse buying since little research focused on the relationship of social norms and impulse buying behaviours. As a result, a series of theoretical implications are generated by the findings of the experimental studies, these are discussed below.

Contribution to the relationship between impulse buying and social norms

This research has many direct implications for the current literature on the relationship between social norms and impulse buying behaviour as it provides a more comprehensive understanding of the role that social norms play in their different forms i.e. prescriptive norms, proscriptive norms, descriptive norms and injunctive norms in the consumers' impulse buying decision-making process.

The largest part of current consumer buying behaviour literature, which is dedicated to social norms, has focused on consumers' rational and planned decision-making processes (e.g., Cialdini, Reno and Kallgren; 1990). Only limited research (Rook & Fisher, 1995; Luo, 2005) investigated the social norms' effect on irrational buying behaviour, such as impulse buying. Thus, this research has contributed to the understanding on how consumers made impulse buying behaviours by offering evidence that social norms can also influence irrational buying behaviours - impulse buying.

The social norms' effect on impulsive buying has not been discretely examined in previous research. Although Rook and Fisher (1995) firstly proposed that normative information can influence consumers' irrational buying behaviours as the same as rational buying behaviours, their results were limited by the fact that the normative influence on impulse buying has only been investigated at the individual level (i.e. consumers' own normative evaluations) from the collective level (Kropp, et al., 1999; Amos, et al., 2014; Cunha & da Silva, 2015) . Additionally, in Luo's (2005) research about how shopping with others can influence impulse buying, only used the normative information that consumers received from their peers' presence as a normative indicator. In the present study, however, the influences of collective level's normative information on impulsive buying were investigated.

In contrast to previous research, the present quantitative study fills the above-mentioned research gaps by demonstrating the impact of normative information that comes from the collective level of consumers' impulse buying behaviour. The present research divides social norms into different categories and investigates the social norms' effect according to the social norms' characteristics, such as the delivered information (prescriptive norms, proscriptive norms) and delivered ways (descriptive norms, injunctive norms). As a result, when consumers were influenced by the prescriptive social norms, there was a positive relationship between their impulsiveness traits and buying decisions; however, no significant relationship existed between impulsiveness traits and buying decisions when consumers were influenced by the proscriptive social norms (study one). The consumers who were influenced by prescriptive norms held higher impulsive urges with a higher likelihood to buy impulsively when making purchases than the consumers who were influenced by proscriptive norms; and that difference was greater when the social norms were delivered in injunctive norms than in descriptive norms (study two).

Across the range of impulse buying, expressed by consumers' different impulsiveness levels and their likelihood to behave impulsively, social norms appeared to be an influential factor in the consumers' impulse buying process. Since previous research (i.e. Rook and Fisher, 1995; Luo, 2005) focused less on the collective level's norms' effect on impulsive buying, the findings of the present research also offer some theoretical development on impulse buying and provide theoretical frameworks that can be used in the future research that examines the explanatory power of social norms in consumer impulse buying in more detail.

Contribution to the impulsive buying theoretical framework

The theoretical implications also include the three proposed theoretical frameworks (see details in Chapter 3) that portray four different types of social norms on consumers' impulsive buying, as well as the interactive effect with self-construal.

Based on the existing consumer behaviour literature (Ajzen & Fishbein, 1977; Rook & Fisher, 1995), the theoretical framework for study one offers explanations about how consumers behave when impulsive buying under the influence of different types of social norms (prescriptive norms or proscriptive norms), and how social norms can influence the relationship between impulsiveness trait and buying decisions.

Additionally, the theoretical framework for study two offers further explanations on the effect of different social norms on impulsive buying by dividing social norms into two social norms' types according to the different delivery ways. This framework offers an advanced understanding on social norms' effect on impulsive buying as it investigated four different types of social norms when compared with study one. Based on this framework, consumers' impulsive buying can be understood better when considering the effect of social norms.

What is more, the theoretical framework for study three also contributes to the understanding of social norms' effect on impulsive buying by further involving self-construal as a potential influence factor. This extended framework provides a wider scope for the social norms' influence on consumers' impulsive buying. This is because it not only considered social norms differences, but also took into account consumers' differences in self-construal which may further affect their susceptibility to social norms.

Moreover, different social norms (prescriptive norms, proscriptive norms) were identified with the main effect on impulsive buying, and where the social norms' different ways of delivery and consumers' self-construal have an interactive effect on impulse buying, combined with the main effect. The interaction between the three dimensions makes an additional theoretical contribution, in the sense that these can help to explain when and how social norms could influence consumers' impulse buying, and to what extent they do not carry forward into consumers' immediate impulsive urges when buying.

Contribution to the psychology literature

It also contributes to the literature in psychology as it investigates how consumers with different self-construal can receive and reflect the social norms' influence differently on impulse buying.

The findings related to the interactive effect of self-construal and social norms on consumer impulse buying show that the dependent consumers' susceptibility to social norms were higher than that of independent consumers (study three). Unlike Zhang and Shrum's (2008) studies that only used problem drinking (negative impulse buying that may produce negative consequences) as an impulse buying indicator, the present research uses buying behaviours that usually happen in consumers' daily life as the impulse indicator. The present research results contribute to the literature by revealing the self-construal's effect on impulse buying

behaviour even within the same product category (e.g., “Mary” was described as she saw a beautiful sweater that was not on her shopping list, in all experimental groups).

The present research findings not only support Zhang and Shrum’s (2008) conclusion that self-construal has an effect on people’s impulse buying, but also fills the research gap in investigations of neutral buying (i.e. buying clothing can be seen as negative for the environment etc., while, buying charity clothing can let consumers donate to charity etc.), instead of only using negative buying that may cause negative outcomes as the impulse buying indicator, thus the present research provides a more comprehensive understanding of the self-construal effect on impulse buying.

In summary, the present research findings offer a comprehensive understanding of the normative influence process on impulsive buying from the collective normative evaluation level. The findings not only support Luo’s (2005) arguments on the Theories of Reasoned Action and Planned Behaviour (Fishbein & Ajzen, 1975), which state that normative information can influence irrational behaviour – impulse buying (Rook & Fisher, 1995; Luo, 2005; Zhang & Shrum, 2008; Xiong & Jing, 2010; Amos, et al., 2014); but also fill the research gap between the collective social norms’ effect on impulsive buying behaviour, and how self-construal can further impact that effect.

6.5.2 Practical contributions

While the theoretical contributions discussed above are related to understanding consumers’ impulse buying when they are influenced by social norms, the practical contributions related to the application of such findings in the realm of marketing communications, marketing strategies, merchandising and segmentation.

Marketing communications and strategies

The existing literature indicates that marketing communications based on social norms are under-researched in connection to the impulse buying, when regarded as a negative type of behaviour. Thus, the success of the experimental manipulation of social norms can help practitioners to develop alternative marketing communications (beyond the product category of a sweater which has been used in the current research experiments) particularly for the consumers who lack self-control. Social norms-loaded marketing communications can be seen as an effective approach to influence consumers' impulse buying because consumers respond with consistent buying behaviours when provided with information that contains social norms. By suggesting the role of social norms in one's impulsive buying behaviour, marketing communications could generate more frequent engagement in impulsive buying behaviour related to ethical consumption, environmental protection etc. and which could have positive consequences company sales and other organisational performance indicators.

The experimental studies show that the advertisements using prescriptive norms or proscriptive norms can successfully encourage or discourage products purchasing (i.e. clothing). The findings showing consumers are more willing to buy a product impulsively when it contains prescriptive norms than contains proscriptive norms, could be used in advertisements which are designed to influence consumers' impulse buying into a more ethical way. Since both types of advertisement with prescriptive normative information or proscriptive information generate the expected effect on impulse buying behaviour, in this current research, this indicates that both approaches can be used in marketing communications. For example, cosmetic retailers can encourage consumers to buy their products by tagging a label to highlight they do not use animal-testing for their products, and retailers can design a slogan to promote their products by highlighting their donation

behaviour (i.e. one pound of your payments will be donated to British Heart Foundation on your behalf) as a part of their social marketing activities and point-of-purchase communications.

The experimental studies also indicate that the social norms' effect on consumers vary depending on how they are delivered (in the format of the descriptive or injunctive norm). This finding also has some implications relating to the design of advertisements. For example, the message or image could be carefully designed so that the social norms can be expressed in a more suitable way (i.e. normative information should be delivered with a stronger influence power in the advertisement that aims to reduce consumers' animal fur consumption. Thus, the proscriptive and injunctive norms should be selected and used in the ads). Subsequently, consumers can receive and react better to the adverts following their impulsive urges.

Given the fact that consumers respond differently to different types of social norms, and that the data collected shows that the effect of social norms on consumers' impulse buying behaviours varies depending on consumers' self-construal types (independent self-construal or dependent self-construal), it became clear that the use of social norms in marketing communications should consider consumer differences regarding self-construal. For example, when marketing practitioners want to influence the impulse buying of their target segment which holds an independent self-construal, they should use a more persuading to deliver the social norms information (i.e. Animal Protecting Associations can design a slogan such as "As a member of the society, we should do our every effort to protect our environment" to encourage people not to consume fur products, rather than use the slogan of "Majority people are willing to protect our environment").

Consumer Segmentation

Concerning consumers' self-construal, the present findings have implications for marketing communications because consumers' susceptibilities to the normative information were different depending on which self-construal they have; and because self-construal means consumers feel close to or separate from the group and other group members. Therefore the differences in consumers' self-construal could lead to different reactions following the normative influence from the social group (Zhang & Shrum, 2008). Thus, according to the desired outcomes, marketers can consider who will be their target consumers (i.e. the ads are designed to be applied in a western country or eastern country) when designing their advertisements that are aimed to increase or decrease the possibility of demonstrating a certain impulsive buying behaviour. For example, when companies use the normative information in their ads to encourage consumers do a certain consumption (i.e. donation to help others) by highlighting the consequent benefits for the society, it should be expressed in a more powerful injunctive way to independent consumers than dependent consumers, such as saying "A part of the sales will be donated to the British Heart Foundation on your behalf".

What is more, the knowledge about how consumers with different self-construal manage differently their impulsive urges could be also of use for marketers in the non-profit organisations. This is because normative strategies could be employed in other marketing communications. For example, in western non-profit organisations or charity foundations can use injunctive social norms in their promotion strategies in order to reduce fur consumption or to promote public welfare as the majority of western people hold long-term independent self-construal in their actual life (Holland, et al., 2004). Thus the marketers need to use a more powerful way to express the normative information to them (i.e. use the

slogan of “We should help the people in need”). This way, the independent western people can be encouraged more effectively by the normative information.

Merchandising: packaging and in-store displays

Beyond the marketing communications implications, the findings suggest merchandising implications, particularly in terms of product packaging and in-store displays. With regards to packaging, a logo that contains normative information (i.e. put the British Heart Foundation’s logo on the product’s package and saying part of the sale would be donated to charity) can be included on the packaging. This can help to better position the products and express the normative information to consumers more effectively, even to the consumers who are less likely to buy impulsively.

And the paired in-store displays and advertisements should be considered when possible, as these can enhance the physical product exhibition in a purchasing environment. The products that contain normative information can be displayed with logos in a particular area and in special sections. For example, retailers can display the fur clothes in an chosen area and put some logos on the hangers to remind consumers to protect animals by considering not do the fur consumptions; and retailers also can display posters in the specific fur products selling area to remind consumers to consider whether they really need to buy the fur products, or whether they can choose fake fur products instead.

Overall, the present research’s practical implications relate to marketing communications and marketing strategies, particularly in terms of consumer segments, product packaging and displays can be considered by the marketers in commercial companies and non-profit public organisations when they designing the marketing communication strategies. Moreover, the implications can be used in different industries, such as the fashion industry,

fast food industry and grocery to try to lead consumers behave more appropriately. Additionally, marketers also can apply these implications to different target market across countries to influence their consumers' buying behaviour, then achieve a better performance.

6.6 Research limitations

The laboratory experimental design for this research were used the most suitable and reliable method to answer a series of research questions that are consistent with the research objectives (see Section 3.3). Additionally, laboratory experiments have the potential advantage of reducing alternative explanations for the impulse-and-buying relationships results as relevant data were collected in artificial experimental settings by dividing the participants into random groups, where the researcher was able to manipulate and control the variables to a high level (Campbell, 1957; Cook & Campbell, 1976). Nevertheless, limitations are identified in relation to the present laboratory experimental design, in turn, these are discussed below.

Laboratory experiments allow the researcher to identify precise relationships between two or more variables via an artificially created laboratory simulation, and to analyse the data with quantitative analytical techniques to make generalizable statements that are applicable to real-life situations (Saxe & Fine, 1982; Jones, 1985; Smith, 2000). However, the laboratory experiments also have some key weaknesses, such as the "*limited extent to which identified relationships exist in the real world due to oversimplification of the experimental situation and the isolation of such situations from most of the variables that are found in the real world*" (Galliers, 1991, p. 150), as opposed to field experiments (Greenberg & Tomlinson, 2004). But Galliers (1991) also concluded that this artificiality does not represent a big issue when the research purpose is theory-testing (Berkowitz & Donnerstein,

1982) or trying to identify what types of conditions lead to certain behaviours (Carlsmith, et al., 1976). The present research aims to test the relationship between consumers' impulsiveness traits and buying behaviours, then the artificially laboratory simulation would not be a big issue for the present research's results. Moreover, carrying out the experiment in a real field setting (actual shopping mall) would have been very difficult to achieve because the independent experimental variables (i.e. it is hard to identify whether the social norms information are delivered to consumers successfully) would be very difficult to control (see Section 4.3 Experimental design).

During the experiment, participants' self-construal was manipulated to dependent or independent self-construal, based on the experimental group to which they were assigned. Although everyone possesses both self-construal types, manipulating the participants towards either one in the experiment may not represent their actual immediate self-construal under such buying situations, and that may limit the results of self-construal's interactive effect with social norms (i.e. consumers' self-construal types can be checked after they answered questions under the experiments). However, as shown in the pre-test for the self-construal priming task, participants can be efficiently and successfully manipulated to the desired self-construal, and thus decrease the response bias of not-real self-construal.

Additionally, the use of a student sample is a potential issue. A series of counterarguments in favour of the selected student sample are presented in Section 4.3.6. For example, although the differences between student samples and older adults have very little relevance to the current experiment, which aims to test the effect of different social norms on consumers' impulse buying (Mook, 1983), the student sample retains some potential limitations, such as a lower epitomizing capability, which means it is hard to generalise the results (Peterson, 2001).

Moreover, the sample size in the present research meets the minimum requirement for experimental design in consumer behaviour disciplines (see details in Section 4.3.6), but a larger sample would have been more desirable. The lack of normal distribution relating to the likelihood of consumers' impulse buying (in study one, two, and three) and impulsive urges (in study two) may be caused by the insufficient sample size. And larger samples always yield more precise estimates (Biau, et al., 2008), so a possible design for the future research could be to recruit a larger sample size, when possible.

Additionally, there also are some other limitations related to the research design such as the chosen variables and whether any other potentially important consumer behaviour or psychological variables were excluded; and the respondent bias in study one that might have been caused by the experimental design (i.e. the data collected from prescriptive × descriptive norms experimental group and prescriptive × injunctive norms group have been combined together as prescriptive norms groups when conducting the data analysis). The present research should have also had a better control for variables that may have had an undesired effect on the main findings (i.e. more detailed manipulation checks were desirable). In a situation where more time and money/incentives were available, the experimental research could have been developed so that there were more equally buying situations for prescriptive group and proscriptive group in study one; this would have then reduced the bias that may have been caused by the different buying situations.

Finally, as the current research findings come from the experimental data which was collected under the designed buying scenarios, there findings' replication can be seen as limited. Whether the findings can be applied in a different setting is still to be tested. Further studies about social norms' effect on impulse buying in a different context should be thus conducted to check the generalizability of the current results.

Despite these limitations, measures that might limit their impact on the findings, are discussed in detail in Chapters 4 and 5. In conclusion, the present research avoids more research limitations by adopting an experimental design.

6.7 Recommendations for future research

Several directions for future research can be suggested in the light of the present findings and the limitations. The present experimental studies showed that UK consumers are more willing to demonstrate an impulsive buying behaviour when this particular buying style is approved by social norms, than when it is not approved. However, as indicated by Blau (1986), social norms might vary amongst different social groups as social norms are a shared common belief is transmitted within one group. So future research could examine the social norms' difference effect on impulse buying between different social groups. Such as investigate the social norms' different effect on impulsive buying in an eastern culture group setting, which may share different types of social beliefs with the current UK's social setting.

Another suggestion for future research is that of a repeated experimental study, which would examine the extent of the social norms' effect on impulsive buying over time, not just focussing on the social norms' immediate effect on impulse buying. Moreover, since every one of us holds both self-construal traits (Trafimow, et al., 1991), only the current active self-construal trait, within a particular buying situation, would influence the consumers' susceptibility to social norms. Further studies might research the consumers' actual self-construal interactive effect with social norms on impulse buying.

The theoretical framework presented in Sections 3.4, 3.5 and 3.6 offers a snapshot into the consumers' impulse buying decision process as it shows the role played by social norms and consumers' activated self-construal in the process. This suggests that future research could

elaborate the analysis on the factors that can influence consumers' decision on impulse buying on the whole. Some important variables to be added to existing research, such as how consumers' subjective norms can influence their impulsive buying based on the Fishbein's Reasoned Action Theory (Ajzen & Fishbein, 1977).

Moreover, compared with the present research, the social norms' effect on impulsive buying can be further tested in other product categories, such as non-profit and social marketing (i.e. investigate how social norms can affect consumers' impulsive buying in a charity store or charity auction).

And the future research can change the current laboratory experiment settings to a more real one, such as use videos to present the shopping scenarios to the participants rather than the current word described one. That could include manipulation of other stimuli that are issued in a real retail environment (i.e. sight, sound, music), which might affect consumers' impulsive responses too.

Additionally, at the very least, the results that emerge from the student sample could inform future research when conducted using other sample groups. Future research can also be carried out on a larger sample or could use a non-student sample, to test the reliability of these experimental studies.

6.8 Summary

This chapter discusses the findings of this research in light of previous studies, the three research objectives and with regards to the theoretical and practical implications of the present research.

The research offers evidence for the role that different social norms play, in particular prescriptive norms and proscriptive norms, in consumers' impulsive buying behaviour; and the self-construal's interactive effect with social norms on impulse buying. It demonstrates that consumers' impulsive buying can be influenced by social norms, and that consumers are more willing to behave in a particular way when buying impulsively (i.e. when it is approved by social norms than when it is not approved by them). It finds that consumers with an activated dependent self-construal can receive and reflect the normative influence from social norms than independent consumers do.

The findings concerning the social norms' effect on impulse buying also lead to the development of a normative influence on impulse buying with both theoretical and practical implications, whilst self-construal helps to explain individuals' indifference in the acceptance of the normative influence that come from social norms. The aforementioned findings signed the clear contributions of this thesis. The theoretical contributions relate to providing evidence for the manifestation of social norms in impulse buying and their specific impact on consumers' impulsive buying decisions. In particular, the use of social norms' normative influence on irrational buying behaviours – impulse buying advances the consumer behaviour theory and provides empirical support for the previously mooted theoretical propositions. The practical implications of the current research relate to the development of marketing communications that employ normative messages to encourage or discourage consumers behave impulsive buying in a certain buying situation. The finding that prescriptive norms increase the possibility of consumers to behave in a certain impulse buying way that is approved by the social norms offers a new option for marketers and policy makers who want to direct consumers to demonstrate more ethical buying behaviours when impulsive buying happen.

Overall, this research provides a complex set of results, and helps to build knowledge regarding the role of social norms on consumers' impulse buying, as well as the self-construal's interactive effect with social norms on impulse buying. It also offers empirical support for the important theoretical concepts and directs the potential opportunities that marketers, managers and policy makers can consider for their marketing communications. Developing marketing activities that involve social norms would be beneficial, not only for the interested parties as previously mentioned, but also for society at large.

CHAPTER 7 CONCLUSION

7.1 Introduction

The aim of this chapter is to revisit the present research objectives, and highlights the key areas in which knowledge about the role of social norms and self-construal in impulsive buying have been advanced by this research project.

This chapter starts by presenting the rationale for the present research (Section 7.2), followed by the research objectives (Section 7.3). Then the chapter continues with a discussion of the main research contributions (Section 7.4) and concludes with some final remarks (Section 7.5).

7.2 Rationale for the present research

The present research was carried out to explore the role of social norms and self-construal in the context of impulsive buying. The literature review (Chapter 2), located in the field of consumer behaviour and consumer psychology, proposed that the normative information can also influence consumers' irrational impulsive buying as well as rational behaviours.

Normative information's effect on people's rational behaviours has been identified in several previous theories, such as the Theory of Planned Behavior and Reasoned Action (Ajzen, 1991; Montaña & Kasprzyk, 2002) and the Focus Theory of Normative Conduct (Perkins & Berkowitz, 1986; Cialdini, et al., 1990; Lapinski & Rimal, 2005). As a kind of irrational behaviour, impulsive buying has been firstly linked to normative influence in Rook and Fisher's (1995) research. Here, the individuals' normative evaluations on impulsive buying has been confirmed as having the same effects as on other rational behaviours, i.e.

consumers were more willing to demonstrate favourable buying behaviours depending on their normative evaluations, even when the consumers were doing impulsive buying. Normative information has been identified to have a moderating effect on the relationship between impulsiveness and impulsive buying. In other words, consumers would behave consistent with their impulsiveness when they evaluated their immediate impulsive buying as a social favourable behaviour (i.e. buying that related to animal welfare); however, the consumers would suppress their impulsiveness when they evaluated their immediate impulsive buying behaviour as a socially unfavourable behaviour (i.e. buying the alcohol impulsively) (Rook & Fisher, 1995). The literature also showed that the normative evaluations from important others can influence consumers' impulsive buying in the same way as consumers' own normative evaluations on a particular impulsive buying behaviour (Luo, 2005). Specifically, consumers were more likely to impulsively buy, which was consistent with their impulsive urge, when they received the approval information from the present peers, than when they received an unapproval information about the impulsive buying behaviour from their present peers.

The literature also pointed out that except consumers' perceived normative information, the consumers' self-construal also can influence their impulsive buying behaviours (Zhang & Shrum, 2008; Xiong & Jing, 2010; Ackerman & Chung, 2012; Gibbs & Yaoyuneyong, 2014). Zhang and Shrum (2008) argued that consumers' self-construal can influence their acceptance of the perceived normative information, then further effect their impulsive buying. In other words, consumers with independent self-construal were more likely to buy dependent on their own feeling and thinking, while dependent consumers were more likely to consider whether their behaviours would be appropriate and accepted by the society. Thus, in terms of impulsive buying, consumers with independent self-construal are more likely to

behave in an impulsive buying manner according to their inner impulsive urge, while dependent consumers may suppress their inner impulsive urge when they think their buying behaviours are not approved by the society as they desire group harmony and conformity (Gibbs & Yaoyuneyong, 2014).

The need to investigate the impact of collective normative information and self-construal on impulsive buying was justified on two bases. Firstly, the consumer behaviour literature dedicated to the collective normative influence on impulsive buying is limited. Previous studies that related to normative influence on impulsive buying only focused on the normative information at the individual levels, such as the consumers' own evaluations (Rook & Fisher, 1995) and important others' (i.e. friends or family members) evaluations (Luo, 2005). Thus, in order to get a more comprehensive understanding of the normative influence on impulsive buying, research about the collective social norms' effect on impulsive buying needed to be conducted. Secondly, although self-construal's effect on impulsive buying has been already studied in past research, former studies on how consumers with different self-construal behave only viewed impulsive buying as a negative buying behaviour, and these studies tried to provide answers on how to decrease consumers' inclination to impulse buying. For example, Allahverdipour et al. (2007) used drug abuse and Zhang and Shrum (2008) used problem alcohol drinking as impulsive buying indicators. Moreover there is a need for research investigating how consumers with different self-construal behave in impulsive buying, not only in consumption with negative effects, but that with potentially positive societal effects. Additionally, a limited number of studies examined the interactive effect of self-construal and collective normative information on impulsive buying.

Thus, these limitations of previous research highlighted the need to explore the influence of collective social norms on impulsive buying, and the interactive effect of self-construal and social norms on impulsive buying in the context of more positive behaviours.

7.3 Research objectives revisited

The present research had three objectives:

RO 1: To investigate whether social norms can influence the relationship between consumers' general impulsiveness and their impulse buying.

RO 2: To understand how different types of social norms can influence consumers' impulse buying differently.

RO 3: To examine how consumers' activated self-construal can further influence the social norms' effect on impulse buying.

To achieve these objectives, this study reviewed the literature in the area of the consumer behaviour and consumer psychology. Although impulsive buying has been already studied by previous research (Rook & Fisher, 1995; Luo, 2005; Zhang & Shrum, 2008), but past studies only focused on the individual levels' normative influence on consumers' impulsive buying, i.e. the research focused on the consumers' own normative evaluations' effect upon a particular impulsive buying behaviour (Rook & Fisher, 1995), and the research that used the peer's evaluations upon a specific buying behaviour as normative information (Luo, 2005). Thus, further investigation on how collective social norms can influence consumers' impulsive buying was needed.

The first study of the present research was designed in relation to RO1, which was to investigate whether social norms can influence the relationship between consumers' general impulsiveness and their impulse buying. Social norms have been confirmed to have an effect on the relationship between consumers' general impulsiveness traits and their buying decisions. The relationship between consumers' impulsiveness and impulsive buying in the prescriptive group ($r = 0.626, p = 0.000$) was stronger than that in the control group ($r = 0.462, p < 0.01$); whilst no significant relationship was found between consumers' impulsiveness and impulsive buying in the proscriptive group ($r = 0.091, p > 0.10$). These results answered RO1 and concluded that: social norms can influence the relationship between impulsiveness and impulsive buying. There was a relationship between consumers' impulsiveness and impulsive buying only when they were influenced by prescriptive norms; while there was no relationship exists between their impulsiveness and impulsive buying when they were influenced by proscriptive norms.

The second study of the present research was designed in connection to RO2, which was investigating different social norms' effect on impulsive buying. A main effect of the social norms' type (prescriptive norms, proscriptive norms) on impulsive urges ($F(1,130) = 17.803, p = 0.000$) and buying decisions ($F(1,130) = 31.589, p = 0.000$) was found in this study. Moreover, a significant interaction effect of the types of social norms (prescriptive norms, proscriptive norms) and the style of delivery (injunctive norms, descriptive norms) on impulsive buying was confirmed too ($F(1, 130) = 4.746, p < 0.05$). These findings also provided answers for RO2 and showed: the participants would have a greater urge to buy ($M = 4.56$) and were likely to make more highly impulsive buying decisions ($M = 3.23$) when they were influenced by prescriptive * injunctive social norms; whilst consumers

would have a less impulsive urge ($M = 3.04$) and were less likely to impulse buy ($M = 1.80$) when they were influenced by proscriptive * injunctive social norms.

The third study was related to RO3 and included self-construal as an additional influential factor on impulsive buying together with social norms. The experimental findings confirmed self-construal has an interactive effect with social norms on impulsive buying. Similar to the previous two studies, a main effect of social norms' types on impulsive urges and buying decisions was verified in study three respectively, $F(1, 114) = 100.632, p = 0.000$, $F(1, 114) = 25.193, p = 0.000$. What is more, this study also demonstrated the interactive effect of social norms' types and the ways of delivery on impulse buying ($F(1, 114) = 15.909, p = 0.000$). Moreover, a significant three-way interactive effect of the social norms types, ways of delivery and the self-construal's on impulsive buying ($F(1, 114) = 4.067, p < 0.05$) indicated that the consumers' activated self-construal type can further influence the interactive effect of the social norms' types and ways of delivery on their impulse buying. These findings are connected to RO3 regarding the kind of effect self-construal has with social norms together, on consumers' impulsive buying. It was found social norms would have the strongest influence on the impulsive buying of consumers with a dependent self-construal, when the social norms were delivered in the form of injunctive norms. In other words, social norms would have the strongest positive effect on impulsive buying when the normative information was presented by prescriptive * injunctive norms to the consumers with dependent self-construal; while, social norms would have the strongest negative effect on impulsive buying when the normative information was presented by proscriptive *injunctive norms to the consumers with dependent self-construal.

7.4 The main research contributions

This present research has both theoretical and practical contributions. For the theoretical implications (see details in Section 6.4.1), this research advanced the consumer behaviour literature as it provided a more comprehensive understanding of the collective normative information's effect on impulsive buying. It achieved this by investigating different social norms' effect, and the interactive effect of self-construal and social norms on impulsive buying. More specifically, this research filled the existent research gaps by investigating the normative information's effect on impulsive buying from the collective perspective, and linked self-construal as an influential decisional factor to social norms; following this approach the findings contributed to the understanding of self-construal and social norms' interactive effect on impulsive buying. Moreover, the three proposed theoretical frameworks were confirmed by the present findings and provided a clear understanding of consumers' impulsive buying when they were influenced by social norms, which contributed to a better understanding on consumers' impulsive decision making process.

Regarding the present research's practical implications (see details in Section 6.4.2), these are related to marketing communications and marketing strategies, merchandising and customer segmentations. According to the experimental findings, marketers can design more suitable marketing communication strategies for the promotions and marketing campaigns if they consider the self-construal of the majority of consumers in the target market. This could lead consumers to engage in impulsive buying behaviours that are more socially acceptable and then provide social benefits. Marketers can also design a store-display paired with packaging which can highlight the collective normative information, such as a logo

with normative information on and a special display area for the products which contains normative information logos.

7.5 Summary

This final chapter explained how the research objectives were met, and also presented a summary of the theoretical and practical implications. The research offered evidence for the role that social norms (i.e. different social norms and interacted with self-construal) play in consumers' impulsive buying.

Social norms have been shown to have a main effect on impulsive buying in the present research, which means prescriptive norms can increase the possibility for consumers to impulse buy, while proscriptive norms can decrease consumers' possibility for an impulsive buying.

Additionally, self-construal's interactive effect with social norms on impulsive buying has also been confirmed. Consumers with dependent self-construal would be more likely to show a norm-consistent impulsive buying, which means dependent consumers would be more likely to display a social norm-consistent impulsive buying more than independent consumers. These findings also provided a series of implications for practitioners.

Overall, this research provided a comprehensive set of results that support initial expectations. The work presented here can be seen as developing a more elaborated understanding on the normative influence on impulsive buying. It also offers potential avenues that can be explored by marketers and managers, in order to proliferate social norms-consistent buying. Such a development would be beneficial not just for marketing practitioners and businesses but also for the society at large (i.e. designing and running for

effective social marketing campaigns related to environmental, animal or societal welfare, with positive outcomes).

APPENDICES

Appendix 4.1 Advertising



UNIVERSITY OF
BIRMINGHAM

CALL FOR PARTICIPANTS FOR THE PROJECT

“THE EFFECTS OF SHOPPING MALLS’ CONFIGURATION ON IMPULSE BUYING”

Many consumers are impulse buyers. Consumer behaviour researchers believe that the number of impulse buyer will increase due to novel marketing activities based on new technologies. Thus the study of consumers’ impulse buying is important for both marketing academics and practitioners. This research project seeks to investigate the effects of shopping mall’s configuration on impulse buying. The research is conducted by Misha Xu, a postgraduate researcher in the Department of Marketing in Birmingham Business School.

Previous research shows that shopping environment is an important factor influencing people’s impulse buying. However, nobody has investigated the effect of different shopping mall configurations (strip, L, or U etc.), a constituent factor of shopping environment, on impulse buying yet. By conducting this research, the researcher aims to theoretically and empirically understand how shopping mall’s configurations can influence consumers’ impulse buying behaviour.

We are all consumers. We have our own reactions to shopping malls’ configurations. Your participation in the project is crucial to the success of this project. The findings of this project will give meaningful and constructive implications to both marketing academia and practitioners.

Baes on the nature of research, only participants with British nationality will be recruited. Your participation will make this project meaningful and constructive. If you are willing to contribute to this project by taking part into one short experiment and share your opinion, please contact:

Misha XU

MXX294@bham.ac.uk

Doctoral Researcher in Marketing

Birmingham Business School

University of Birmingham

Thank you for your time and consideration.

Appendix 4.2 The questionnaire for the pre-test of impulse level of impulse buying decisions alternatives

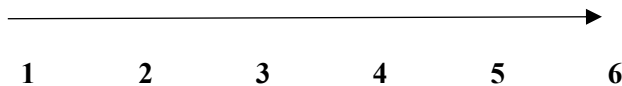
After presenting the same situation used in the control condition, participants will be asked to sort the impulsiveness of buying alternatives along a 6-point continuum ranging from 1 (lowest impulsiveness) to 6 (highest impulsiveness).

"Mary is a 21-year-old college student with a part-time job. It is two days before Mary gets her next paycheck and she has only £25 left for necessities. In addition to food, Mary needs to buy a pair of warm socks for an outdoor party this weekend. After work, she goes with her friend Susan to the mall to purchase the socks. As they are walking through Selfridges, Mary sees a great looking sweater on sale for £75."

Please sort the alternatives of buying behaviour that Mary may make along a 6-point continuum. (Response format: 1 - lowest impulsiveness; 6 - highest impulsiveness. Every number only can be used once, and every number must be used at least once).

Lowest impulsiveness

Highest impulsiveness



- ☐ Buying the socks only
- ☐ Buying the socks, wanting the sweater but not buying it
- ☐ Buying these plus matching clacks and a shirt, also with a credit card
- ☐ Deciding not to buy the socks, buying the sweater with a credit card instead
- ☐ Deciding not to buy the socks, no purchase at all
- ☐ Deciding to buy the sweater with the socks together with a credit card

Appendix 4.3 the questionnaire for the pre–test of self–construal priming task

Please indicate how much you agree or disagree with the following statements in a 7-point Likert scale. We are interested in how you feel right now.

| | | | | | | |
|-------------------|---|----------------------------|----------|---|----------------|----------|
| Strongly Disagree | | Neither Disagree nor Agree | | | Strongly Agree | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

1. At this moment, I focused on myself.
2. At this moment, I focused on others I care about.
3. This research encourages me to think of myself.
4. This research encourages me to think of others I care about.
5. Right now, the sense of “I” is at the top of my mind.
6. Right now, the sense of “we” is at the top of my mind.

Appendix 4.4 Information sheet

Participants' Information Sheet for the Research of

“THE EFFECT OF SHOPPING MALLS' CONFIGURATION ON IMPULSE BUYING”

Misha Xu, Ph. D Candidate in University of Birmingham

Dear participants,

Please take some time to read through the following information. If you have any questions related to the research, please do not hesitate to ask the researcher directly or via the email: MX294@bham.ac.uk.

Purpose of the research

The research project aims to obtain evidence about whether and how the configurations of the malls can influence consumers' impulse buying behaviour.

Background of the research

An increasing number of consumers have been identified as impulse buyers by many scholars in the past decades. However, the investigation into the effect of different configurations of shopping malls (strip, L, or U etc.) on impulse buying are very limited. You are a consumer. The interaction between you and the configurations of shopping mall can be extremely important and helpful for me to gain insight on the effect of shopping malls' configurations on impulse buying. What is more, your answers are important for marketers, strategy makers, organizer etc. to design better marketing strategies.

What you need to do

You will be assigned randomly into one of five groups, and during the experiment, a scenario will be presenting to you. In the experiment, you need to put yourself into the scenario and imagine the protagonist as yourself. You will need to share your opinions in the questionnaires during the experiment.

Please bear in mind that we expect to see your buying behaviour when you indulge yourself into the scenario. There is no right or wrong answers in the experiment.

The experiment will last for about 20 minutes.

Your data

All your information and answer will be processed as confidential, and your data will not be used for any other purpose except this current research project.

Any information that can trace back to you will not be asked in the experiment. You do not need to sign your actual/full name on the consent form, signing the date and return the form to the researcher means that you agree to take a part in the study. The study is anonymous unless you are glad to share your information.

Withdraw

You can withdraw from the study at any time when the experiment is ongoing (but before you return the forms to the researcher). Once the experiment has been finished and you have returned the forms to the researcher, you cannot withdraw anymore. This because the research is anonymous, it is difficult to find out your data and remove it after you return the forms.

Thank you for reading this information sheet.

Misha Xu

E: MXX294@bham.ac.uk

Ph. D Candidate in Marketing

Birmingham Business School

College of Social Science

University of Birmingham

Appendix 4.5 Consent form

CONSENT FORM

By signing, dating and returning this form to the researcher, I am agreeing to participation in the study on the terms outlined below:

- I confirm that I have read and understand the information sheet for the research project which titled “The Effect of Shopping Mall’s configuration on Impulse Buying”.
- I have had the opportunity to ask any questions related to this study, and received satisfactory answers, and any other additional details I wanted.
- I understand that my participation is voluntary, and I can withdraw from the experiment at any time before the experiment has been finished without giving any reason, without consequence.
- I will have the chance to be explained the details of the experiments’ design after I finish the questionnaire.
- I understand that the study is anonymous, and all information related to me will be treated as confidential. Only the research team can access the data, and all the data collected in the study will not be used for any other purpose.
- I already read and agreed the agreements listed above, and agree to participate into the above study.

Signature of the participant:Date:

Signature of the researcher: Date:

(When completed: 1 for participant; 1 for researcher)

Appendix 4.6 Debriefing material

Due to the nature of the study, in order to prevent participants having time to think rationally and consider what the socially desirable manner is, the actual title and purpose of the research have been concealed. I apologize for the deception. Now I will give a debriefing of my research and if you do not want to be involved after debrief, you can still withdraw without any consequence.

The research which titled “The Effect of Social Norms on Impulse Buying” is conducted by Misha Xu, a postgraduate researcher from Birmingham Business School, University of Birmingham.

It is easy to be observed that many companies and organisations have used social norms in their marketing strategies. For example, The Body Shop, TOM’S, AVON, Boss, etc. use societal marketing as an important marketing strategy; and many organisations and public sector bodies (e.g. the UK Department for International Development, the World Health Organization, PETA, the Us Agency for International Development, etc.) also use social marketing to influence consumers’ behaviour for greater social benefit.

Traditional consumer studies normally link social norms with “reasoned” or “planned” buying behaviour. However, some researchers also indicated that consumers’ normative evaluations based on social norms also can influence their impulsive buying behaviour. Currently in consumer behaviour literature there is a dearth of studies about how social norms can influence impulsive buying behaviour – a type of irrational buying behaviour.

Understanding that social norms have an influence on impulse buyers, I am inspired to conduct a piece of research to gain a better theoretical understanding of how social norms moderate the relationship between consumers’ impulsiveness and impulse buying. What is more, by constructing different groups of social norms, I am aiming to find out under what combination, social norms have the most power on impulse buying; and which group of impulse buyers (self-construal: independent or interdependent) can be effected by social norms the most.

In this study, you have been randomly assigned into one of five scenarios: one control group and four experiment groups with different combination of characteristics of social norms. The researcher will get the results by analysing the variance between groups after the experiment.

You are a consumer and a group member in the society. The interaction between you and the social norms can be extremely important and helpful for me to gain insight into the effect of social norms on impulse buying. What is more, your answers are important for marketers, strategy makers, organizer etc. to design better marketing strategies and leverage the balance between profit-making marketing and social responsibility.

If you have any questions related to the research, please feel free to ask. And if you do not want to be involved in this research, you are still free to withdraw without any consequence. Just simply do not return the forms to the researcher.

Thanks for your time and participant.

Appendix 4.7 The scenarios and questionnaires that used in study one

The questionnaire that used in proscriptive group: (1/2)

1. Please indicate the degree of your agreement for the following statements

| | 1 (Strongly Disagree) | 2 (Somewhat Disagree) | 3 (Neither Disagree Nor Agree) | 4 (Somewhat Agree) | 5 (Strongly Agree) |
|--|-----------------------------|-----------------------------|---|--------------------------|--------------------------|
| I often buying things spontaneously | | | | | |
| ‘Just do it’ describes the way I buy things | | | | | |
| I often buy things without thinking | | | | | |
| ‘I see it, I buy it’ describes me | | | | | |
| ‘Buy now, think about it later’ describes me | | | | | |
| Sometimes I feel like buying things on the spur-of- the-moment | | | | | |
| I buy things according to how I feel at the moment | | | | | |
| I carefully plan most of my purchases | | | | | |
| Sometimes I am a bit reckless about what I buy | | | | | |

Please read the scenario below, and answer the following questions.

“Mary is a 21-year-old university student with a part-time job. It is two days before Mary gets her next paycheck and she has only £25 left for necessities. In addition to food, Mary needs to buy a pair of warm socks for an outdoor party this weekend. After work, she goes with her friend Susan to the mall to purchase the socks. As they are walking through Selfridges, Mary sees a great looking sweater with fur, which is on sale for £75. The sweater has a sticker on which says ‘Our nation-wide Animal Welfare Protection Charity is trying to defend animal welfare and to decrease animal slaughter by encouraging a boycott of real fur products. You are welcome to join us.’”

2. If you were Mary, which buying decision would you make?

- 1) Direct buying the socks only,
- 2) Deciding not to buy the socks, no purchase at all,
- 3) Wanting the sweater but not buying it, buying the socks,
- 4) Deciding to buy the sweater with a credit card and not the socks,
- 5) Deciding to buy the sweater with the socks together with a credit card
- 6) Buying these plus matching jeans and a shirt, also with a credit card.

3. When reading the scenario, have you recognized that the imaginary character (MARY) saw a sticker that contained normative information? (Note: normative information delivers the information of what the majority of people expect individuals to do or discourage individuals to do; and what is normally done by majority group numbers. For example “protect the earth by saving water”, “reuse plastic bags” and “do not litter everywhere” etc.)

Yes / No

4. Please circle the answer that shows how much you agree/disagree with the statement: “The normative information on the sticker encouraged ME to buy the sweater”

| | | | | | | |
|---------------------------------|------------------------|---------------------------------|--|------------------------------|---------------------|------------------------------|
| <u>1</u> (Strongly disagree) | <u>2</u> (Disagree) | <u>3</u> (Somewhat disagree) | <u>4</u> (Neither disagree nor agree) | <u>5</u> (Somewhat agree) | <u>6</u> (Agree) | <u>7</u> (Strongly agree) |
|---------------------------------|------------------------|---------------------------------|--|------------------------------|---------------------|------------------------------|

The questionnaire that used in proscriptive group: (2/2)

1. Please indicate the degree of your agreement for the following statements

| | 1 (Strongly Disagree) | 2 (Somewhat Disagree) | 3 (Neither Disagree Nor Agree) | 4 (Somewhat Agree) | 5 (Strongly Agree) |
|--|-----------------------------|-----------------------------|---|--------------------------|--------------------------|
| I often buying things spontaneously | | | | | |
| ‘Just do it’ describes the way I buy things | | | | | |
| I often buy things without thinking | | | | | |
| ‘I see it, I buy it’ describes me | | | | | |
| ‘Buy now, think about it later’ describes me | | | | | |
| Sometimes I feel like buying things on the spur-of- the-moment | | | | | |
| I buy things according to how I feel at the moment | | | | | |
| I carefully plan most of my purchases | | | | | |
| Sometimes I am a bit reckless about what I buy | | | | | |

Please read the scenario below, and answer the following questions.

“Mary is a 21-year-old university student with a part-time job. It is two days before Mary gets her next paycheck and she has only £25 left for necessities. In addition to food, Mary needs to buy a pair of warm socks for an outdoor party this weekend. After work, she goes with her friend Susan to the mall to purchase the socks. As they are walking through Selfridges, Mary sees a great looking sweater with fur, which is on sale for £75. The sweater has a sticker on which says ‘It is our duty to protect animals’ welfare and keep the ecological balance. Boycott fur! It is our duty to protect the animals.’”

2. If you were Mary, which buying decision would you make?

- 1) Direct buying the socks only,
- 2) Deciding not to buy the socks, no purchase at all,
- 3) Wanting the sweater but not buying it, buying the socks,
- 4) Deciding to buy the sweater with a credit card and not the socks,
- 5) Deciding to buy the sweater with the socks together with a credit card
- 6) Buying these plus matching jeans and a shirt, also with a credit card.

3. When reading the scenario, have you recognized that the imaginary character (MARY) saw a sticker that contained normative information? (Note: normative information delivers the information of what the majority of people expect individuals to do or discourage individuals to do; and what is normally done by majority group numbers. For example “protect the earth by saving water”, “reuse plastic bags” and “do not litter everywhere” etc.)

Yes / No

4. Please circle the answer that shows how much you agree/disagree with the statement: “The normative information on the sticker encouraged ME to buy the sweater”

| | | | | | | |
|---------------------------------|------------------------|---------------------------------|--|------------------------------|---------------------|------------------------------|
| <u>1</u> (Strongly disagree) | <u>2</u> (Disagree) | <u>3</u> (Somewhat disagree) | <u>4</u> (Neither disagree nor agree) | <u>5</u> (Somewhat agree) | <u>6</u> (Agree) | <u>7</u> (Strongly agree) |
|---------------------------------|------------------------|---------------------------------|--|------------------------------|---------------------|------------------------------|

The questionnaire that used in prescriptive group: (1/2)

1. Please indicate the degree of your agreement for the following statements

| | 1 (Strongly Disagree) | 2 (Somewhat Disagree) | 3 (Neither Disagree Nor Agree) | 4 (Somewhat Agree) | 5 (Strongly Agree) |
|--|-----------------------------|-----------------------------|---|--------------------------|--------------------------|
| I often buying things spontaneously | | | | | |
| ‘Just do it’ describes the way I buy things | | | | | |
| I often buy things without thinking | | | | | |
| ‘I see it, I buy it’ describes me | | | | | |
| ‘Buy now, think about it later’ describes me | | | | | |
| Sometimes I feel like buying things on the spur-of- the-moment | | | | | |
| I buy things according to how I feel at the moment | | | | | |
| I carefully plan most of my purchases | | | | | |
| Sometimes I am a bit reckless about what I buy | | | | | |

Please read the scenario below, and answer the following questions.

“Mary is a 21-year-old university student with a part-time job. It is two days before Mary gets her next paycheck and she has only £25 left for necessities. In addition to food, Mary needs to buy a pair of warm socks for an outdoor party this weekend. After work, she goes with her friend Susan to the mall to purchase the socks. As they are walking through Selfridges, Mary sees a great looking sweater, which is on sale for £75. The sweater has a sticker on which says ‘We believe every little helps and giving to the people in need would make our world better. We will donate £5 to the People’s Welfare Protection Charity with every sweater purchase.’”

2. If you were Mary, which buying decision would you make?

- 1) Direct buying the socks only,
- 2) Deciding not to buy the socks, no purchase at all,
- 3) Wanting the sweater but not buying it, buying the socks,
- 4) Deciding to buy the sweater with a credit card and not the socks,
- 5) Deciding to buy the sweater with the socks together with a credit card
- 6) Buying these plus matching jeans and a shirt, also with a credit card.

3. When reading the scenario, have you recognized that the imaginary character (MARY) saw a sticker that contained normative information? (Note: normative information delivers the information of what the majority of people expect individuals to do or discourage individuals to do; and what is normally done by majority group numbers. For example “protect the earth by saving water”, “reuse plastic bags” and “do not litter everywhere” etc.)

Yes / No

4. Please circle the answer that shows how much you agree/disagree with the statement: “The normative information on the sticker encouraged ME to buy the sweater”

| | | | | | | |
|---------------------------------|------------------------|---------------------------------|--|------------------------------|---------------------|------------------------------|
| 1 (Strongly disagree) | 2 (Disagree) | 3 (Somewhat disagree) | 4 (Neither disagree nor agree) | 5 (Somewhat agree) | 6 (Agree) | 7 (Strongly agree) |
|---------------------------------|------------------------|---------------------------------|--|------------------------------|---------------------|------------------------------|

The questionnaire that used in prescriptive group: (2/2)

1. Please indicate the degree of your agreement for the following statements

| | 1 (Strongly Disagree) | 2 (Somewhat Disagree) | 3 (Neither Disagree Nor Agree) | 4 (Somewhat Agree) | 5 (Strongly Agree) |
|--|-----------------------------|-----------------------------|---|--------------------------|--------------------------|
| I often buying things spontaneously | | | | | |
| ‘Just do it’ describes the way I buy things | | | | | |
| I often buy things without thinking | | | | | |
| ‘I see it, I buy it’ describes me | | | | | |
| ‘Buy now, think about it later’ describes me | | | | | |
| Sometimes I feel like buying things on the spur-of- the-moment | | | | | |
| I buy things according to how I feel at the moment | | | | | |
| I carefully plan most of my purchases | | | | | |
| Sometimes I am a bit reckless about what I buy | | | | | |

Please read the scenario below, and answer the following questions.

“Mary is a 21-year-old university student with a part-time job. It is two days before Mary gets her next paycheck and she has only £25 left for necessities. In addition to food, Mary needs to buy a pair of warm socks for an outdoor party this weekend. After work, she goes with her friend Susan to the mall to purchase the socks. As they are walking through Selfridges, Mary sees a great looking sweater, which is on sale for £75. The sweater has a sticker on which says ‘Every one of us should make an effort to help people in need! When you buy this sweater, we will donate £5 to the People’s Welfare Protection Charity.’”

2. If you were Mary, which buying decision would you make?

- 1) Direct buying the socks only,
- 2) Deciding not to buy the socks, no purchase at all,
- 3) Wanting the sweater but not buying it, buying the socks,
- 4) Deciding to buy the sweater with a credit card and not the socks,
- 5) Deciding to buy the sweater with the socks together with a credit card
- 6) Buying these plus matching jeans and a shirt, also with a credit card.

3. When reading the scenario, have you recognized that the imaginary character (MARY) saw a sticker that contained normative information? (Note: normative information delivers the information of what the majority of people expect individuals to do or discourage individuals to do; and what is normally done by majority group numbers. For example “protect the earth by saving water”, “reuse plastic bags” and “do not litter everywhere” etc.)

Yes / No

4. Please circle the answer that shows how much you agree/disagree with the statement: “The normative information on the sticker encouraged ME to buy the sweater”

| | | | | | | |
|---------------------------------|------------------------|---------------------------------|--|------------------------------|---------------------|------------------------------|
| <u>1</u> (Strongly disagree) | <u>2</u> (Disagree) | <u>3</u> (Somewhat disagree) | <u>4</u> (Neither disagree nor agree) | <u>5</u> (Somewhat agree) | <u>6</u> (Agree) | <u>7</u> (Strongly agree) |
|---------------------------------|------------------------|---------------------------------|--|------------------------------|---------------------|------------------------------|

The questionnaire that used in control group:

1. Please indicate the degree of your agreement for the following statements

| | 1 (Strongly Disagree) | 2 (Somewhat Disagree) | 3 (Neither Disagree Nor Agree) | 4 (Somewhat Agree) | 5 (Strongly Agree) |
|--|-----------------------------|-----------------------------|---|--------------------------|--------------------------|
| I often buying things spontaneously | | | | | |
| ‘Just do it’ describes the way I buy things | | | | | |
| I often buy things without thinking | | | | | |
| ‘I see it, I buy it’ describes me | | | | | |
| ‘Buy now, think about it later’ describes me | | | | | |
| Sometimes I feel like buying things on the spur-of- the-moment | | | | | |
| I buy things according to how I feel at the moment | | | | | |
| I carefully plan most of my purchases | | | | | |
| Sometimes I am a bit reckless about what I buy | | | | | |

Please read the scenario below, and answer the following questions.

“Mary is a 21-year-old university student with a part-time job. It is two days before Mary gets her next paycheck and she has only £25 left for necessities. In addition to food, Mary needs to buy a pair of warm socks for an outdoor party this weekend. After work, she goes with her friend Susan to the mall to purchase the socks. As they are walking through Selfridges, Mary sees a great looking sweater which is on sale for £75.”

2. If you were Mary, which buying decision would you make?

- 1) Direct buying the socks only,
- 2) Deciding not to buy the socks, no purchase at all,
- 3) Wanting the sweater but not buying it, buying the socks,
- 4) Deciding to buy the sweater with a credit card and not the socks,
- 5) Deciding to buy the sweater with the socks together with a credit card
- 6) Buying these plus matching jeans and a shirt, also with a credit card.

Appendix 4.8 The scenarios and questionnaires that used in study two

The questionnaire that used in proscriptive*descriptive group:

1. Please indicate the degree of your agreement for the following statements

| | 1 (Strongly Disagree) | 2 (Somewhat Disagree) | 3 (Neither Disagree Nor Agree) | 4 (Somewhat Agree) | 5 (Strongly Agree) |
|--|-----------------------------|-----------------------------|---|--------------------------|--------------------------|
| I often buying things spontaneously | | | | | |
| ‘Just do it’ describes the way I buy things | | | | | |
| I often buy things without thinking | | | | | |
| ‘I see it, I buy it’ describes me | | | | | |
| ‘Buy now, think about it later’ describes me | | | | | |
| Sometimes I feel like buying things on the spur-of- the-moment | | | | | |
| I buy things according to how I feel at the moment | | | | | |
| I carefully plan most of my purchases | | | | | |
| Sometimes I am a bit reckless about what I buy | | | | | |

Please read the scenario below, and answer the following questions.

“Mary is a 21-year-old university student with a part-time job. It is two days before Mary gets her next paycheck and she has only £25 left for necessities. In addition to food, Mary needs to buy a pair of warm socks for an outdoor party this weekend. After work, she goes with her friend Susan to the mall to purchase the socks. As they are walking through Selfridges, Mary sees a great looking sweater with fur, which is on sale for £75. The sweater has a sticker on which says ‘Our nation-wide Animal Welfare Protection Charity is trying to defend animal welfare and to decrease animal slaughter by encouraging a boycott of real fur products. You are welcome to join us.’”

2. If you were Mary, which buying decision would you make?

- 1) Direct buying the socks only,
- 2) Deciding not to buy the socks, no purchase at all,
- 3) Wanting the sweater but not buying it, buying the socks,
- 4) Deciding to buy the sweater with a credit card and not the socks,
- 5) Deciding to buy the sweater with the socks together with a credit card
- 6) Buying these plus matching jeans and a shirt, also with a credit card.

3. When reading the scenario, have you recognized that the imaginary character (MARY) saw a sticker that contained normative information? (Note: normative information delivers the information of what the majority of people expect individuals to do or discourage individuals to do; and what is normally done by majority group numbers. For example “protect the earth by saving water”, “reuse plastic bags” and “do not litter everywhere” etc.)

Yes / No

4. Please circle the answer that shows how much you agree/disagree with the statement: “The normative information on the sticker encouraged ME to buy the sweater”

| | | | | | | |
|---------------------------------|------------------------|---------------------------------|--|------------------------------|---------------------|------------------------------|
| 1 (Strongly disagree) | 2 (Disagree) | 3 (Somewhat disagree) | 4 (Neither disagree nor agree) | 5 (Somewhat agree) | 6 (Agree) | 7 (Strongly agree) |
|---------------------------------|------------------------|---------------------------------|--|------------------------------|---------------------|------------------------------|

The questionnaire that used in proscriptive*injunctive group:

1. Please indicate the degree of your agreement for the following statements

| | 1 (Strongly Disagree) | 2 (Somewhat Disagree) | 3 (Neither Disagree Nor Agree) | 4 (Somewhat Agree) | 5 (Strongly Agree) |
|--|-----------------------------|-----------------------------|---|--------------------------|--------------------------|
| I often buying things spontaneously | | | | | |
| ‘Just do it’ describes the way I buy things | | | | | |
| I often buy things without thinking | | | | | |
| ‘I see it, I buy it’ describes me | | | | | |
| ‘Buy now, think about it later’ describes me | | | | | |
| Sometimes I feel like buying things on the spur-of- the-moment | | | | | |
| I buy things according to how I feel at the moment | | | | | |
| I carefully plan most of my purchases | | | | | |
| Sometimes I am a bit reckless about what I buy | | | | | |

Please read the scenario below, and answer the following questions.

“Mary is a 21-year-old university student with a part-time job. It is two days before Mary gets her next paycheck and she has only £25 left for necessities. In addition to food, Mary needs to buy a pair of warm socks for an outdoor party this weekend. After work, she goes with her friend Susan to the mall to purchase the socks. As they are walking through Selfridges, Mary sees a great looking sweater with fur, which is on sale for £75. The sweater has a sticker on which says ‘It is our duty to protect animals’ welfare and keep the ecological balance. Boycott fur! It is our duty to protect the animals.’”

2. If you were Mary, which buying decision would you make?

- 1) Direct buying the socks only,
- 2) Deciding not to buy the socks, no purchase at all,
- 3) Wanting the sweater but not buying it, buying the socks,
- 4) Deciding to buy the sweater with a credit card and not the socks,
- 5) Deciding to buy the sweater with the socks together with a credit card
- 6) Buying these plus matching jeans and a shirt, also with a credit card.

3. When reading the scenario, have you recognized that the imaginary character (MARY) saw a sticker that contained normative information? (Note: normative information delivers the information of what the majority of people expect individuals to do or discourage individuals to do; and what is normally done by majority group numbers. For example “protect the earth by saving water”, “reuse plastic bags” and “do not litter everywhere” etc.)

Yes / No

4. Please circle the answer that shows how much you agree/disagree with the statement: “The normative information on the sticker encouraged ME to buy the sweater”

| | | | | | | |
|--|-------------------------------|--|---|-------------------------------------|----------------------------|-------------------------------------|
| <u>1</u> (Strongly disagree) | <u>2</u> (Disagree) | <u>3</u> (Somewhat disagree) | <u>4</u> (Neither disagree nor agree) | <u>5</u> (Somewhat agree) | <u>6</u> (Agree) | <u>7</u> (Strongly agree) |
|--|-------------------------------|--|---|-------------------------------------|----------------------------|-------------------------------------|

The questionnaire that used in prescriptive*descriptive group:

1. Please indicate the degree of your agreement for the following statements

| | 1 (Strongly Disagree) | 2 (Somewhat Disagree) | 3 (Neither Disagree Nor Agree) | 4 (Somewhat Agree) | 5 (Strongly Agree) |
|--|-----------------------------|-----------------------------|---|--------------------------|--------------------------|
| I often buying things spontaneously | | | | | |
| ‘Just do it’ describes the way I buy things | | | | | |
| I often buy things without thinking | | | | | |
| ‘I see it, I buy it’ describes me | | | | | |
| ‘Buy now, think about it later’ describes me | | | | | |
| Sometimes I feel like buying things on the spur-of- the-moment | | | | | |
| I buy things according to how I feel at the moment | | | | | |
| I carefully plan most of my purchases | | | | | |
| Sometimes I am a bit reckless about what I buy | | | | | |

Please read the scenario below, and answer the following questions.

“Mary is a 21-year-old university student with a part-time job. It is two days before Mary gets her next paycheck and she has only £25 left for necessities. In addition to food, Mary needs to buy a pair of warm socks for an outdoor party this weekend. After work, she goes with her friend Susan to the mall to purchase the socks. As they are walking through Selfridges, Mary sees a great looking sweater, which is on sale for £75. The sweater has a sticker on which says ‘We believe every little helps and giving to the people in need would make our world better. We will donate £5 to the People’s Welfare Protection Charity with every sweater purchase.’”

2. If you were Mary, which buying decision would you make?

- 1) Direct buying the socks only,
- 2) Deciding not to buy the socks, no purchase at all,
- 3) Wanting the sweater but not buying it, buying the socks,
- 4) Deciding to buy the sweater with a credit card and not the socks,
- 5) Deciding to buy the sweater with the socks together with a credit card
- 6) Buying these plus matching jeans and a shirt, also with a credit card.

3. When reading the scenario, have you recognized that the imaginary character (MARY) saw a sticker that contained normative information? (Note: normative information delivers the information of what the majority of people expect individuals to do or discourage individuals to do; and what is normally done by majority group numbers. For example “protect the earth by saving water”, “reuse plastic bags” and “do not litter everywhere” etc.)

Yes / No

4. Please circle the answer that shows how much you agree/disagree with the statement: “The normative information on the sticker encouraged ME to buy the sweater”

| | | | | | | |
|---------------------------------|------------------------|---------------------------------|--|------------------------------|---------------------|------------------------------|
| <u>1</u> (Strongly disagree) | <u>2</u> (Disagree) | <u>3</u> (Somewhat disagree) | <u>4</u> (Neither disagree nor agree) | <u>5</u> (Somewhat agree) | <u>6</u> (Agree) | <u>7</u> (Strongly agree) |
|---------------------------------|------------------------|---------------------------------|--|------------------------------|---------------------|------------------------------|

The questionnaire that used in prescriptive*injunctive group:

1. Please indicate the degree of your agreement for the following statements

| | 1 (Strongly Disagree) | 2 (Somewhat Disagree) | 3 (Neither Disagree Nor Agree) | 4 (Somewhat Agree) | 5 (Strongly Agree) |
|--|-----------------------------|-----------------------------|---|--------------------------|--------------------------|
| I often buying things spontaneously | | | | | |
| ‘Just do it’ describes the way I buy things | | | | | |
| I often buy things without thinking | | | | | |
| ‘I see it, I buy it’ describes me | | | | | |
| ‘Buy now, think about it later’ describes me | | | | | |
| Sometimes I feel like buying things on the spur-of- the-moment | | | | | |
| I buy things according to how I feel at the moment | | | | | |
| I carefully plan most of my purchases | | | | | |
| Sometimes I am a bit reckless about what I buy | | | | | |

Please read the scenario below, and answer the following questions.

“Mary is a 21-year-old university student with a part-time job. It is two days before Mary gets her next paycheck and she has only £25 left for necessities. In addition to food, Mary needs to buy a pair of warm socks for an outdoor party this weekend. After work, she goes with her friend Susan to the mall to purchase the socks. As they are walking through Selfridges, Mary sees a great looking sweater, which is on sale for £75. The sweater has a sticker on which says ‘Every one of us should make an effort to help people in need! When you buy this sweater, we will donate £5 to the People’s Welfare Protection Charity.’”

2. If you were Mary, which buying decision would you make?

- 1) Direct buying the socks only,
- 2) Deciding not to buy the socks, no purchase at all,
- 3) Wanting the sweater but not buying it, buying the socks,
- 4) Deciding to buy the sweater with a credit card and not the socks,
- 5) Deciding to buy the sweater with the socks together with a credit card
- 6) Buying these plus matching jeans and a shirt, also with a credit card.

3. When reading the scenario, have you recognized that the imaginary character (MARY) saw a sticker that contained normative information? (Note: normative information delivers the information of what the majority of people expect individuals to do or discourage individuals to do; and what is normally done by majority group numbers. For example “protect the earth by saving water”, “reuse plastic bags” and “do not litter everywhere” etc.)

Yes / No

4. Please circle the answer that shows how much you agree/disagree with the statement: “The normative information on the sticker encouraged ME to buy the sweater”

| | | | | | | |
|---------------------------------|------------------------|---------------------------------|--|------------------------------|---------------------|------------------------------|
| <u>1</u> (Strongly disagree) | <u>2</u> (Disagree) | <u>3</u> (Somewhat disagree) | <u>4</u> (Neither disagree nor agree) | <u>5</u> (Somewhat agree) | <u>6</u> (Agree) | <u>7</u> (Strongly agree) |
|---------------------------------|------------------------|---------------------------------|--|------------------------------|---------------------|------------------------------|

The questionnaire that used in control group:

1. Please indicate the degree of your agreement for the following statements

| | 1 (Strongly Disagree) | 2 (Somewhat Disagree) | 3 (Neither Disagree Nor Agree) | 4 (Somewhat Agree) | 5 (Strongly Agree) |
|--|-----------------------------|-----------------------------|---|--------------------------|--------------------------|
| I often buying things spontaneously | | | | | |
| ‘Just do it’ describes the way I buy things | | | | | |
| I often buy things without thinking | | | | | |
| ‘I see it, I buy it’ describes me | | | | | |
| ‘Buy now, think about it later’ describes me | | | | | |
| Sometimes I feel like buying things on the spur-of- the-moment | | | | | |
| I buy things according to how I feel at the moment | | | | | |
| I carefully plan most of my purchases | | | | | |
| Sometimes I am a bit reckless about what I buy | | | | | |

Please read the scenario below, and answer the following questions.

“Mary is a 21-year-old university student with a part-time job. It is two days before Mary gets her next paycheck and she has only £25 left for necessities. In addition to food, Mary needs to buy a pair of warm socks for an outdoor party this weekend. After work, she goes with her friend Susan to the mall to purchase the socks. As they are walking through Selfridges, Mary sees a great looking sweater which is on sale for £75.”

2. If you were Mary, which buying decision would you make?

- 1) Direct buying the socks only,
- 2) Deciding not to buy the socks, no purchase at all,
- 3) Wanting the sweater but not buying it, buying the socks,
- 4) Deciding to buy the sweater with a credit card and not the socks,
- 5) Deciding to buy the sweater with the socks together with a credit card
- 6) Buying these plus matching jeans and a shirt, also with a credit card.

Appendix 4.9 The scenarios and questionnaires that used in study three

In study 3, participants were signed into two groups (independent group/ interdependent group) randomly, they will be asked to answer the questions under the scenario after the priming procedure.

In the priming procedure, participants will be asked to take five minutes to write down all of the thoughts after they have being told

“Remember, enjoying your life is what it is really all about” (independent)

Or

“Remember, enjoying relationships with your family or friends is what it is really all about” (Dependent)

The questionnaires that used for the independent experimental groups (4 sub-groups: proscriptive*descriptive group, proscriptive*injunctive group, prescriptive group*descriptive group and prescriptive*injunctive group) were the same with that for dependent groups (4 sub-groups).

The questionnaire that used in proscriptive*descriptive group (same for independent groups and dependent groups):

1. Please indicate the degree of your agreement for the following statements

| | 1 (Strongly Disagree) | 2 (Somewhat Disagree) | 3 (Neither Disagree Nor Agree) | 4 (Somewhat Agree) | 5 (Strongly Agree) |
|--|-----------------------------|-----------------------------|---|--------------------------|--------------------------|
| I often buying things spontaneously | | | | | |
| ‘Just do it’ describes the way I buy things | | | | | |
| I often buy things without thinking | | | | | |
| ‘I see it, I buy it’ describes me | | | | | |
| ‘Buy now, think about it later’ describes me | | | | | |
| Sometimes I feel like buying things on the spur-of- the-moment | | | | | |
| I buy things according to how I feel at the moment | | | | | |
| I carefully plan most of my purchases | | | | | |
| Sometimes I am a bit reckless about what I buy | | | | | |

Please read the scenario below, and answer the following questions.

“Mary is a 21-year-old university student with a part-time job. It is two days before Mary gets her next paycheck and she has only £25 left for necessities. In addition to food, Mary needs to buy a pair of warm socks for an outdoor party this weekend. After work, she goes with her friend Susan to the mall to purchase the socks. As they are walking through Selfridges, Mary sees a great looking sweater with fur, which is on sale for £75. The sweater has a sticker on which says ‘Our nation-wide Animal Welfare Protection Charity is trying to defend animal welfare and to decrease animal slaughter by encouraging a boycott of real fur products. You are welcome to join us.’”

2. If you were Mary, which buying decision would you make?

- 1) Direct buying the socks only,
- 2) Deciding not to buy the socks, no purchase at all,
- 3) Wanting the sweater but not buying it, buying the socks,
- 4) Deciding to buy the sweater with a credit card and not the socks,
- 5) Deciding to buy the sweater with the socks together with a credit card
- 6) Buying these plus matching jeans and a shirt, also with a credit card.

3. When reading the scenario, have you recognized that the imaginary character (MARY) saw a sticker that contained normative information? (Note: normative information delivers the information of what the majority of people expect individuals to do or discourage individuals to do; and what is normally done by majority group numbers. For example “protect the earth by saving water”, “reuse plastic bags” and “do not litter everywhere” etc.)

Yes / No

4. Please circle the answer that shows how much you agree/disagree with the statement: “The normative information on the sticker encouraged ME to buy the sweater”

| | | | | | | |
|---------------------------------|------------------------|---------------------------------|--|------------------------------|---------------------|------------------------------|
| <u>1</u> (Strongly disagree) | <u>2</u> (Disagree) | <u>3</u> (Somewhat disagree) | <u>4</u> (Neither disagree nor agree) | <u>5</u> (Somewhat agree) | <u>6</u> (Agree) | <u>7</u> (Strongly agree) |
|---------------------------------|------------------------|---------------------------------|--|------------------------------|---------------------|------------------------------|

The questionnaire that used in proscriptive*injunctive group (same for independent groups and dependent groups):

1. Please indicate the degree of your agreement for the following statements

| | 1 (Strongly Disagree) | 2 (Somewhat Disagree) | 3 (Neither Disagree Nor Agree) | 4 (Somewhat Agree) | 5 (Strongly Agree) |
|--|-----------------------------|-----------------------------|---|--------------------------|--------------------------|
| I often buying things spontaneously | | | | | |
| ‘Just do it’ describes the way I buy things | | | | | |
| I often buy things without thinking | | | | | |
| ‘I see it, I buy it’ describes me | | | | | |
| ‘Buy now, think about it later’ describes me | | | | | |
| Sometimes I feel like buying things on the spur-of- the-moment | | | | | |
| I buy things according to how I feel at the moment | | | | | |
| I carefully plan most of my purchases | | | | | |
| Sometimes I am a bit reckless about what I buy | | | | | |

Please read the scenario below, and answer the following questions.

“Mary is a 21-year-old university student with a part-time job. It is two days before Mary gets her next paycheck and she has only £25 left for necessities. In addition to food, Mary needs to buy a pair of warm socks for an outdoor party this weekend. After work, she goes with her friend Susan to the mall to purchase the socks. As they are walking through Selfridges, Mary sees a great looking sweater with fur, which is on sale for £75. The sweater has a sticker on which says ‘It is our duty to protect animals’ welfare and keep the ecological balance. Boycott fur! It is our duty to protect the animals.’”

2. If you were Mary, which buying decision would you make?

- 1) Direct buying the socks only,
- 2) Deciding not to buy the socks, no purchase at all,
- 3) Wanting the sweater but not buying it, buying the socks,
- 4) Deciding to buy the sweater with a credit card and not the socks,
- 5) Deciding to buy the sweater with the socks together with a credit card
- 6) Buying these plus matching jeans and a shirt, also with a credit card.

3. When reading the scenario, have you recognized that the imaginary character (MARY) saw a sticker that contained normative information? (Note: normative information delivers the information of what the majority of people expect individuals to do or discourage individuals to do; and what is normally done by majority group numbers. For example “protect the earth by saving water”, “reuse plastic bags” and “do not litter everywhere” etc.)

Yes / No

4. Please circle the answer that shows how much you agree/disagree with the statement: “The normative information on the sticker encouraged ME to buy the sweater”

| | | | | | | |
|--|-------------------------------|--|---|-------------------------------------|----------------------------|-------------------------------------|
| <u>1</u> (Strongly disagree) | <u>2</u> (Disagree) | <u>3</u> (Somewhat disagree) | <u>4</u> (Neither disagree nor agree) | <u>5</u> (Somewhat agree) | <u>6</u> (Agree) | <u>7</u> (Strongly agree) |
|--|-------------------------------|--|---|-------------------------------------|----------------------------|-------------------------------------|

The questionnaire that used in prescriptive*descriptive group (same for independent groups and dependent groups):

1. Please indicate the degree of your agreement for the following statements

| | 1 (Strongly Disagree) | 2 (Somewhat Disagree) | 3 (Neither Disagree Nor Agree) | 4 (Somewhat Agree) | 5 (Strongly Agree) |
|--|-----------------------------|-----------------------------|---|--------------------------|--------------------------|
| I often buying things spontaneously | | | | | |
| ‘Just do it’ describes the way I buy things | | | | | |
| I often buy things without thinking | | | | | |
| ‘I see it, I buy it’ describes me | | | | | |
| ‘Buy now, think about it later’ describes me | | | | | |
| Sometimes I feel like buying things on the spur-of- the-moment | | | | | |
| I buy things according to how I feel at the moment | | | | | |
| I carefully plan most of my purchases | | | | | |
| Sometimes I am a bit reckless about what I buy | | | | | |

Please read the scenario below, and answer the following questions.

“Mary is a 21-year-old university student with a part-time job. It is two days before Mary gets her next paycheck and she has only £25 left for necessities. In addition to food, Mary needs to buy a pair of warm socks for an outdoor party this weekend. After work, she goes with her friend Susan to the mall to purchase the socks. As they are walking through Selfridges, Mary sees a great looking sweater, which is on sale for £75. The sweater has a sticker on which says ‘We believe every little helps and giving to the people in need would make our world better. We will donate £5 to the People’s Welfare Protection Charity with every sweater purchase.’”

2. If you were Mary, which buying decision would you make?

- 1) Direct buying the socks only,
- 2) Deciding not to buy the socks, no purchase at all,
- 3) Wanting the sweater but not buying it, buying the socks,
- 4) Deciding to buy the sweater with a credit card and not the socks,
- 5) Deciding to buy the sweater with the socks together with a credit card
- 6) Buying these plus matching jeans and a shirt, also with a credit card.

3. When reading the scenario, have you recognized that the imaginary character (MARY) saw a sticker that contained normative information? (Note: normative information delivers the information of what the majority of people expect individuals to do or discourage individuals to do; and what is normally done by majority group numbers. For example “protect the earth by saving water”, “reuse plastic bags” and “do not litter everywhere” etc.)

Yes / No

4. Please circle the answer that shows how much you agree/disagree with the statement: “The normative information on the sticker encouraged ME to buy the sweater”

| | | | | | | |
|---------------------------------|------------------------|---------------------------------|--|------------------------------|---------------------|------------------------------|
| <u>1</u> (Strongly disagree) | <u>2</u> (Disagree) | <u>3</u> (Somewhat disagree) | <u>4</u> (Neither disagree nor agree) | <u>5</u> (Somewhat agree) | <u>6</u> (Agree) | <u>7</u> (Strongly agree) |
|---------------------------------|------------------------|---------------------------------|--|------------------------------|---------------------|------------------------------|

The questionnaire that used in prescriptive*injunctive group (same for independent groups and dependent groups):

1. Please indicate the degree of your agreement for the following statements

| | 1 (Strongly Disagree) | 2 (Somewhat Disagree) | 3 (Neither Disagree Nor Agree) | 4 (Somewhat Agree) | 5 (Strongly Agree) |
|--|-----------------------------|-----------------------------|---|--------------------------|--------------------------|
| I often buying things spontaneously | | | | | |
| ‘Just do it’ describes the way I buy things | | | | | |
| I often buy things without thinking | | | | | |
| ‘I see it, I buy it’ describes me | | | | | |
| ‘Buy now, think about it later’ describes me | | | | | |
| Sometimes I feel like buying things on the spur-of- the-moment | | | | | |
| I buy things according to how I feel at the moment | | | | | |
| I carefully plan most of my purchases | | | | | |
| Sometimes I am a bit reckless about what I buy | | | | | |

Please read the scenario below, and answer the following questions.

“Mary is a 21-year-old university student with a part-time job. It is two days before Mary gets her next paycheck and she has only £25 left for necessities. In addition to food, Mary needs to buy a pair of warm socks for an outdoor party this weekend. After work, she goes with her friend Susan to the mall to purchase the socks. As they are walking through Selfridges, Mary sees a great looking sweater, which is on sale for £75. The sweater has a sticker on which says ‘Every one of us should make an effort to help people in need! When you buy this sweater, we will donate £5 to the People’s Welfare Protection Charity.’”

2. If you were Mary, which buying decision would you make?

- 1) Direct buying the socks only,
- 2) Deciding not to buy the socks, no purchase at all,
- 3) Wanting the sweater but not buying it, buying the socks,
- 4) Deciding to buy the sweater with a credit card and not the socks,
- 5) Deciding to buy the sweater with the socks together with a credit card
- 6) Buying these plus matching jeans and a shirt, also with a credit card.

3. When reading the scenario, have you recognized that the imaginary character (MARY) saw a sticker that contained normative information? (Note: normative information delivers the information of what the majority of people expect individuals to do or discourage individuals to do; and what is normally done by majority group numbers. For example “protect the earth by saving water”, “reuse plastic bags” and “do not litter everywhere” etc.)

Yes / No

4. Please circle the answer that shows how much you agree/disagree with the statement: “The normative information on the sticker encouraged ME to buy the sweater”

| | | | | | | |
|---------------------------------|------------------------|---------------------------------|--|------------------------------|---------------------|------------------------------|
| <u>1</u> (Strongly disagree) | <u>2</u> (Disagree) | <u>3</u> (Somewhat disagree) | <u>4</u> (Neither disagree nor agree) | <u>5</u> (Somewhat agree) | <u>6</u> (Agree) | <u>7</u> (Strongly agree) |
|---------------------------------|------------------------|---------------------------------|--|------------------------------|---------------------|------------------------------|

Appendix 5.1 Normal distribution check and robustness check

Study 1:

- The normal distribution of impulsiveness traits in the prescriptive group, proscriptive group and the control group:

Descriptives

| Impulsiveness Trait | Proscripti | Mean | | 2.6864 | .11158 |
|---------------------|------------|-----------------------------|-------------|--------|--------|
| | ve | 95% Confidence Interval for | Lower Bound | 2.4615 | |
| | | Mean | Upper Bound | 2.9112 | |
| | | 5% Trimmed Mean | | 2.7057 | |
| | | Median | | 2.4444 | |
| | | Variance | | .560 | |
| | | Std. Deviation | | .74849 | |
| | | Minimum | | 1.00 | |
| | | Maximum | | 4.00 | |
| | | Range | | 3.00 | |
| | | Interquartile Range | | 1.06 | |
| | | Skewness | | -.040 | .354 |
| | | Kurtosis | | -.443 | .695 |
| | Prescripti | Mean | | 2.6741 | .10748 |
| | ve | 95% Confidence Interval for | Lower Bound | 2.4575 | |
| | | Mean | Upper Bound | 2.8908 | |
| | | 5% Trimmed Mean | | 2.6784 | |
| | | Median | | 2.6700 | |
| | | Variance | | .520 | |
| | | Std. Deviation | | .72102 | |
| | | Minimum | | 1.33 | |
| | | Maximum | | 3.89 | |
| | | Range | | 2.56 | |
| | | Interquartile Range | | 1.28 | |
| | | Skewness | | -.109 | .354 |
| | | Kurtosis | | -1.228 | .695 |
| | Control | Mean | | 2.4132 | .09940 |
| | | | Lower Bound | 2.2129 | |

| | | | |
|----------------------------------|-------------|--------|------|
| 95% Confidence Interval for Mean | Upper Bound | 2.6135 | |
| 5% Trimmed Mean | | 2.4001 | |
| Median | | 2.4444 | |
| Variance | | .445 | |
| Std. Deviation | | .66680 | |
| Minimum | | 1.00 | |
| Maximum | | 4.00 | |
| Range | | 3.00 | |
| Interquartile Range | | .94 | |
| Skewness | | .248 | .354 |
| Kurtosis | | .072 | .695 |

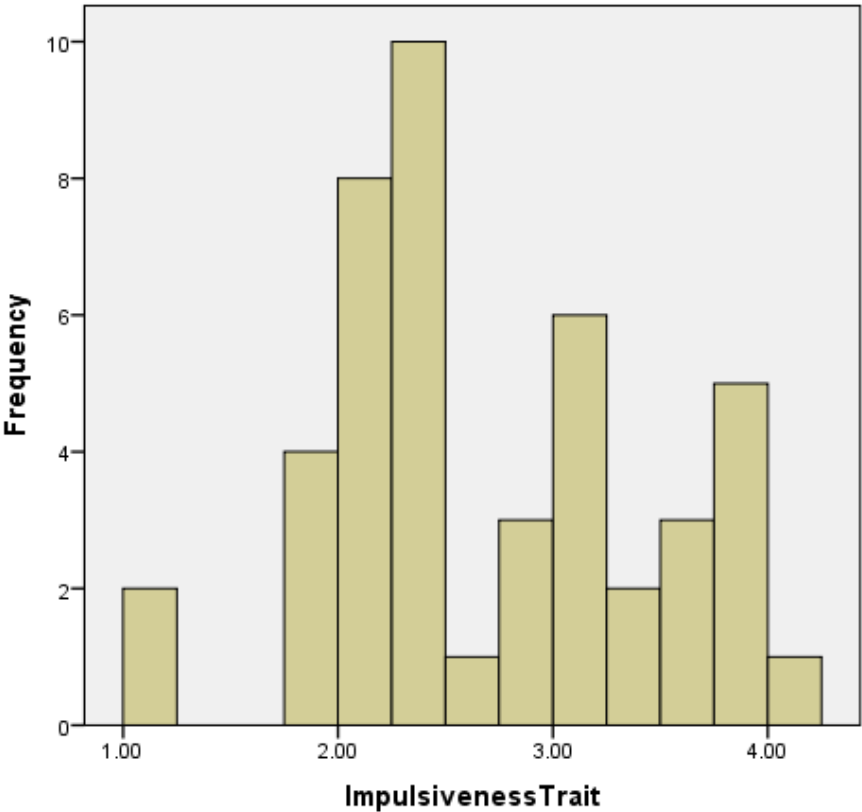
Tests of Normality

| | | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|---------------------|--------------|---------------------------------|----|-------|--------------|----|------|
| | | Statistic | df | Sig. | Statistic | df | Sig. |
| Impulsiveness trait | Proscriptive | .160 | 45 | .005 | .952 | 45 | .060 |
| | Prescriptive | .110 | 45 | .200* | .951 | 45 | .054 |
| | Control | .119 | 45 | .118 | .969 | 45 | .270 |

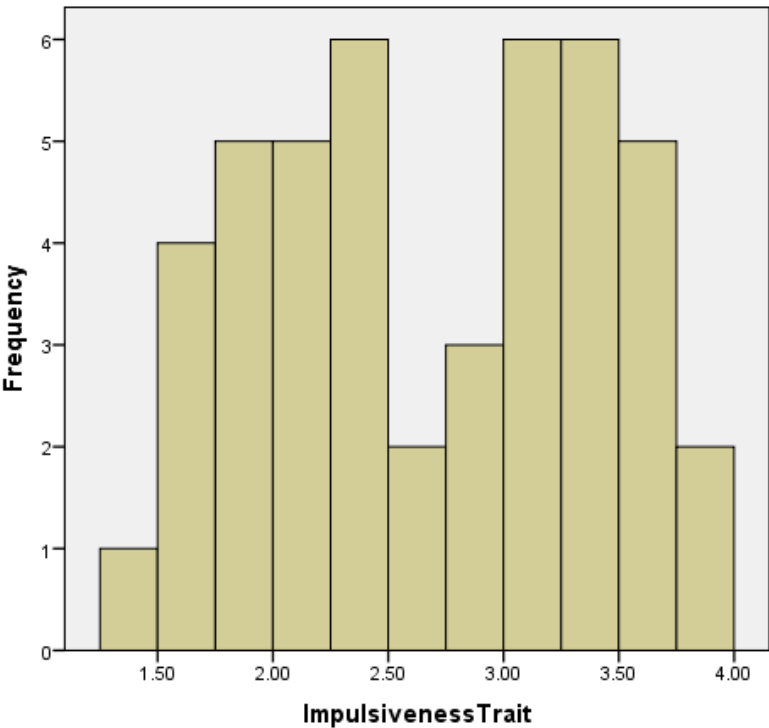
*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

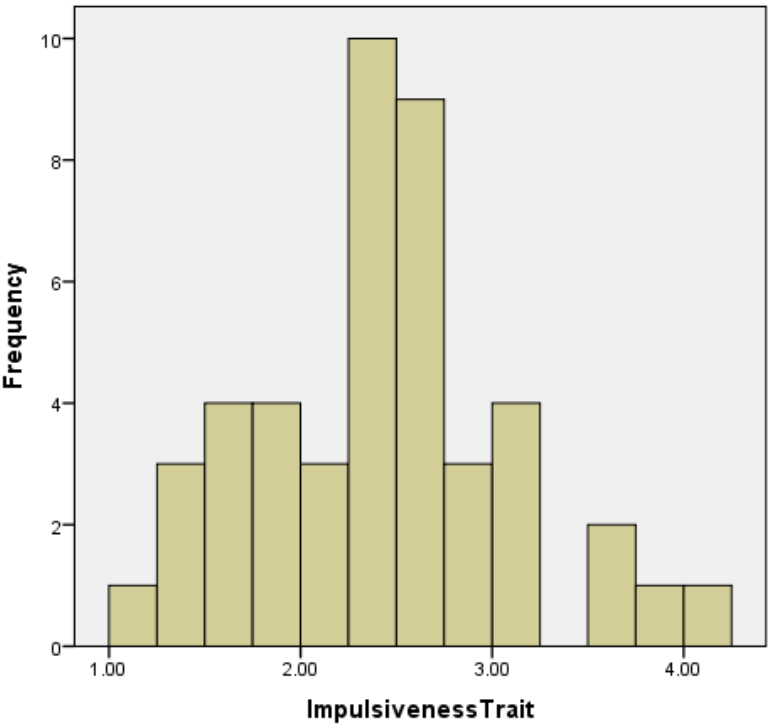
The histogram of the normal distribution of impulsiveness trait in proscriptive group:



The histogram of the normal distribution of impulsiveness trait in prescriptive group:



The histogram of the normal distribution of impulsiveness trait in control group:



- The normal distribution of impulsive buying decisions in the prescriptive group, proscriptive group and the control group:

Descriptives

| | | Statistic | | Std. Error |
|----------|--------------|-------------------------|-------------|------------|
| Decision | Proscriptive | Mean | 1.7556 | .06479 |
| | | 95% Confidence Interval | Lower Bound | 1.6250 |
| | | for Mean | Upper Bound | 1.8861 |
| | | 5% Trimmed Mean | | 1.7840 |
| | | Median | | 2.0000 |
| | | Variance | | .189 |
| | | Std. Deviation | | .43461 |
| | | Minimum | | 1.00 |
| | | Maximum | | 2.00 |
| | | Range | | 1.00 |
| | | Interquartile Range | | .50 |
| | | Skewness | -1.231 | .354 |
| | | Kurtosis | -.510 | .695 |
| | Prescriptive | Mean | 2.7111 | .14079 |
| | | 95% Confidence Interval | Lower Bound | 2.4274 |
| | | for Mean | Upper Bound | 2.9948 |
| | | 5% Trimmed Mean | | 2.6728 |
| | | Median | | 3.0000 |
| | | Variance | | .892 |
| | | Std. Deviation | | .94441 |
| | | Minimum | | 1.00 |
| | | Maximum | | 5.00 |
| | | Range | | 4.00 |
| | | Interquartile Range | | 1.00 |
| | | Skewness | .793 | .354 |
| | | Kurtosis | .566 | .695 |
| | Control | Mean | 2.2667 | .16330 |
| | | 95% Confidence Interval | Lower Bound | 1.9376 |
| | | for Mean | Upper Bound | 2.5958 |
| | | 5% Trimmed Mean | | 2.1852 |
| | | Median | | 2.0000 |
| | | Variance | | 1.200 |
| | | Std. Deviation | | 1.09545 |
| | | Minimum | | 1.00 |
| | | Maximum | | 5.00 |

| | | | |
|--|---------------------|------|------|
| | Range | 4.00 | |
| | Interquartile Range | 1.50 | |
| | Skewness | .957 | .354 |
| | Kurtosis | .706 | .695 |

Tests of Normality

| | | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|-----------|--------------|---------------------------------|----|------|--------------|----|------|
| | | Statistic | df | Sig. | Statistic | df | Sig. |
| Decisions | Proscriptive | .469 | 45 | .000 | .534 | 45 | .000 |
| | Prescriptive | .241 | 45 | .000 | .852 | 45 | .000 |
| | Control | .263 | 45 | .000 | .849 | 45 | .000 |

a. Lilliefors Significance Correction

Because the buying decisions have a violation on the normal distribution in the prescriptive group, proscriptive group and the control group, so the nonparametric test have been further conducted as the robustness check for the impulsive buying's difference between groups.

- The nonparametric test for the buying decisions' difference between the prescriptive group, proscriptive group and the control group:

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 1 | The distribution of Decision is the same across categories of PreProControl. | Independent-Samples Kruskal-Wallis Test | .000 | Reject the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

Study 2:

- The normal distribution of impulsive urge in the prescriptive group, proscriptive group and the control group:

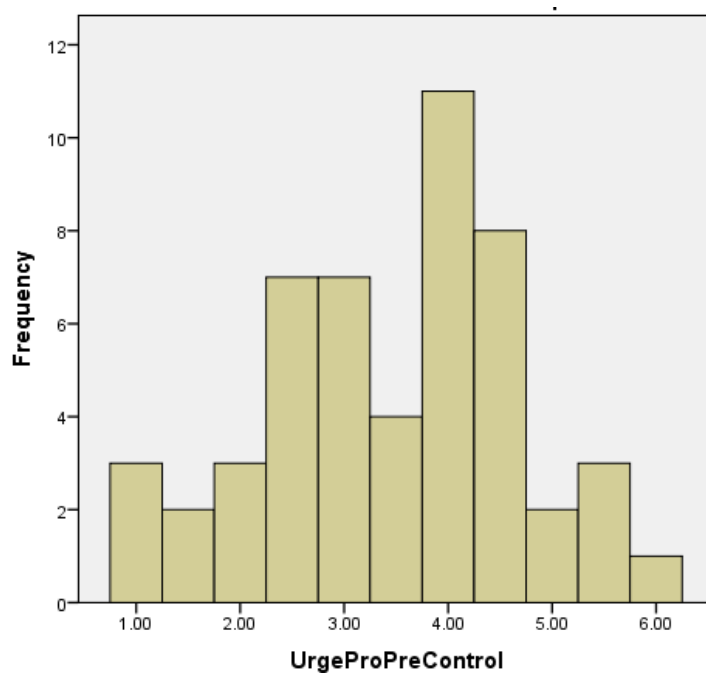
| Descriptives | | | | Statistic | Std. Error |
|--------------|--------------------|----------------------------------|-------------|-----------|------------|
| Urge | Proscriptive group | Mean | | 3.3824 | .17055 |
| | | 95% Confidence Interval for Mean | Lower Bound | 3.0398 | |
| | | | Upper Bound | 3.7249 | |
| | | 5% Trimmed Mean | | 3.3862 | |
| | | Median | | 3.5000 | |
| | | Variance | | 1.483 | |
| | | Std. Deviation | | 1.21794 | |
| | | Minimum | | 1.00 | |
| | | Maximum | | 6.00 | |
| | | Range | | 5.00 | |
| | | Interquartile Range | | 1.75 | |
| | | Skewness | | -.128 | .333 |
| | | Kurtosis | | -.445 | .656 |
| | Prescriptive group | Mean | | 4.4100 | .19256 |
| | | 95% Confidence Interval for Mean | Lower Bound | 4.0230 | |
| | | | Upper Bound | 4.7970 | |
| | | 5% Trimmed Mean | | 4.4306 | |
| | | Median | | 4.5000 | |
| | | Variance | | 1.854 | |
| | | Std. Deviation | | 1.36161 | |
| | | Minimum | | 1.75 | |
| | | Maximum | | 6.50 | |
| | | Range | | 4.75 | |
| | | Interquartile Range | | 2.56 | |
| | | Skewness | | -.291 | .337 |
| | | Kurtosis | | -1.202 | .662 |
| | Control group | Mean | | 4.1532 | .18574 |
| | | 95% Confidence Interval for Mean | Lower Bound | 3.7739 | |
| | | | Upper Bound | 4.5326 | |
| | | 5% Trimmed Mean | | 4.1752 | |
| | | Median | | 4.5000 | |
| | | Variance | | 1.069 | |
| | | Std. Deviation | | 1.03416 | |
| | | Minimum | | 2.00 | |

| | | | |
|--|---------------------|-------|------|
| | Maximum | 6.00 | |
| | Range | 4.00 | |
| | Interquartile Range | 1.50 | |
| | Skewness | -.554 | .421 |
| | Kurtosis | -.282 | .821 |

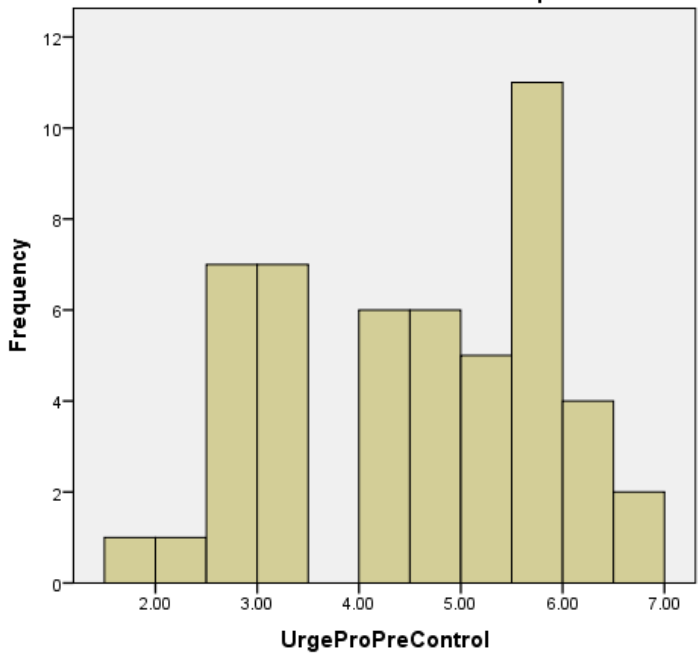
| Tests of Normality | | | | | | | |
|--------------------|--------------|---------------------------------|----|------|--------------|----|------|
| | | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
| | | Statistic | df | Sig. | Statistic | df | Sig. |
| Urge | Proscriptive | .109 | 51 | .186 | .979 | 51 | .486 |
| | Prescriptive | .131 | 50 | .031 | .930 | 50 | .006 |
| | Control | .150 | 31 | .073 | .943 | 31 | .101 |

a. Lilliefors Significance Correction

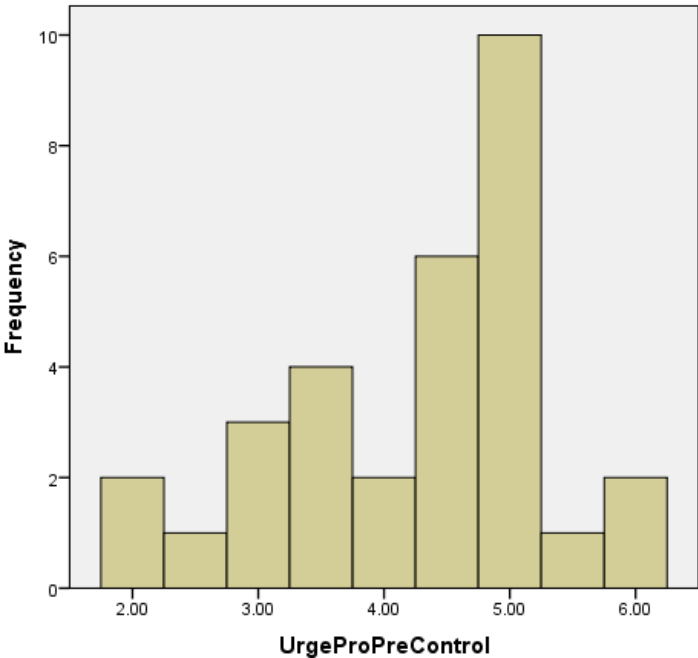
The histogram of the normal distribution of impulsive urge in proscriptive group:



The histogram of the normal distribution of impulsive urge in prescriptive group:



The histogram of the normal distribution of impulsive urge in control group:



- The normal distribution of buying decisions in the prescriptive group, proscriptive group and the control group:

Descriptives

| | | Statistic | | Std. Error |
|----------|--------------------|----------------------------------|-------------|------------|
| Decision | Proscriptive group | Mean | 1.9412 | .11345 |
| | | 95% Confidence Interval for Mean | Lower Bound | 1.7133 |
| | | | Upper Bound | 2.1691 |
| | | 5% Trimmed Mean | | 1.8693 |
| | | Median | | 2.0000 |
| | | Variance | | .656 |
| | | Std. Deviation | | .81023 |
| | | Minimum | | 1.00 |
| | | Maximum | | 5.00 |
| | | Range | | 4.00 |
| | | Interquartile Range | | 1.00 |
| | | Skewness | 1.284 | .333 |
| | | Kurtosis | 3.302 | .656 |
| | Prescriptive group | Mean | 2.9800 | .15516 |
| | | 95% Confidence Interval for Mean | Lower Bound | 2.6682 |
| | | | Upper Bound | 3.2918 |
| | | 5% Trimmed Mean | | 2.9444 |
| | | Median | | 3.0000 |
| | | Variance | | 1.204 |
| | | Std. Deviation | | 1.09712 |
| | | Minimum | | 1.00 |
| | | Maximum | | 5.00 |
| | | Range | | 4.00 |
| | | Interquartile Range | | 1.00 |
| | | Skewness | .814 | .337 |
| | | Kurtosis | -.281 | .662 |
| | Control group | Mean | 2.2903 | .14806 |
| | | 95% Confidence Interval for Mean | Lower Bound | 1.9879 |
| | | | Upper Bound | 2.5927 |
| | | 5% Trimmed Mean | | 2.2509 |
| | | Median | | 2.0000 |
| | | Variance | | .680 |
| | | Std. Deviation | | .82436 |
| | | Minimum | | 1.00 |

| | | | |
|--|---------------------|-------|------|
| | Maximum | 5.00 | |
| | Range | 4.00 | |
| | Interquartile Range | 1.00 | |
| | Skewness | .921 | .421 |
| | Kurtosis | 2.640 | .821 |

Tests of Normality

| | | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|----------|--------------|---------------------------------|----|------|--------------|----|------|
| | | Statistic | df | Sig. | Statistic | df | Sig. |
| Decision | Proscriptive | .314 | 51 | .000 | .780 | 51 | .000 |
| | Prescriptive | .293 | 50 | .000 | .803 | 50 | .000 |
| | Control | .283 | 31 | .000 | .815 | 31 | .000 |

a. Lilliefors Significance Correction

Because some groups' impulsive urge (prescriptive group) and buying decisions (prescriptive group, proscriptive group and the control group) have a violation on their normal distribution, then the nonparametric test have been conducted as the robustness check for the difference between groups. The results are consistent with the T-test's results.

- The nonparametric test for the impulsive urge's difference and the buying decisions' difference between the prescriptive group, proscriptive group and the control group:

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|------|-----------------------------|
| 1 | The distribution of UrgeProPreControl is the same across categories of ProPreControl. | Independent-Samples Kruskal-Wallis Test | .000 | Reject the null hypothesis. |
| 2 | The distribution of DecisionProPreControl is the same across categories of ProPreControl. | Independent-Samples Kruskal-Wallis Test | .000 | Reject the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

Study 3:

- The normal distribution of impulsive urge in the prescriptive group, proscriptive group and the control group:

Descriptives

| | | | | Statistic | Std. Error |
|------|--------------------|----------------------------------|-------------|-----------|------------|
| Urge | Proscriptive group | Mean | | 2.8750 | .12116 |
| | | 95% Confidence Interval for Mean | Lower Bound | 2.6324 | |
| | | | Upper Bound | 3.1176 | |
| | | 5% Trimmed Mean | | 2.8611 | |
| | | Median | | 3.0000 | |
| | | Variance | | .851 | |
| | | Std. Deviation | | .92273 | |
| | | Minimum | | 1.00 | |
| | | Maximum | | 5.00 | |
| | | Range | | 4.00 | |
| | | Interquartile Range | | 1.50 | |
| | | Skewness | | .131 | .314 |
| | | Kurtosis | | -.370 | .618 |
| | Prescriptive group | Mean | | 4.5216 | .11073 |
| | | 95% Confidence Interval for Mean | Lower Bound | 4.2998 | |
| | | | Upper Bound | 4.7433 | |
| | | 5% Trimmed Mean | | 4.5096 | |
| | | Median | | 4.5000 | |
| | | Variance | | .711 | |
| | | Std. Deviation | | .84330 | |
| | | Minimum | | 2.75 | |
| | | Maximum | | 6.50 | |
| | | Range | | 3.75 | |
| | | Interquartile Range | | 1.00 | |
| | | Skewness | | .326 | .314 |
| | | Kurtosis | | -.151 | .618 |

| Tests of Normality | | | | | | | |
|--------------------|--------------|---------------------------------|----|-------|--------------|----|------|
| | | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
| | | Statistic | df | Sig. | Statistic | df | Sig. |
| Urge | Proscriptive | .101 | 58 | .200* | .979 | 58 | .411 |
| | Prescriptive | .128 | 58 | .018 | .972 | 58 | .200 |

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

- The normal distribution of buying decisions in the prescriptive group, proscriptive group and the control group:

| Descriptives | | | | | Statistic | Std. Error |
|--------------|--------------------|----------------------------------|-------------|--|-----------|------------|
| Decision | Proscriptive group | Mean | | | 2.0000 | .09838 |
| | | 95% Confidence Interval for Mean | Lower Bound | | 1.8030 | |
| | | | Upper Bound | | 2.1970 | |
| | | 5% Trimmed Mean | | | 1.9808 | |
| | | Median | | | 2.0000 | |
| | | Variance | | | .561 | |
| | | Std. Deviation | | | .74927 | |
| | | Minimum | | | 1.00 | |
| | | Maximum | | | 4.00 | |
| | | Range | | | 3.00 | |
| | | Interquartile Range | | | 1.25 | |
| | | Skewness | | | .259 | .314 |
| | | Kurtosis | | | -.443 | .618 |
| | Prescriptive group | Mean | | | 2.6897 | .09591 |
| | | 95% Confidence Interval for Mean | Lower Bound | | 2.4976 | |
| | | | Upper Bound | | 2.8817 | |
| | | 5% Trimmed Mean | | | 2.6360 | |
| | | Median | | | 3.0000 | |
| | | Variance | | | .534 | |
| | | Std. Deviation | | | .73046 | |
| | | Minimum | | | 1.00 | |
| | | Maximum | | | 5.00 | |
| | | Range | | | 4.00 | |
| | | Interquartile Range | | | 1.00 | |
| | | Skewness | | | .841 | .314 |
| | | Kurtosis | | | 2.059 | .618 |

| Tests of Normality | | | | | | | |
|--------------------|--------------|---------------------------------|----|------|--------------|----|------|
| | | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
| | | Statistic | df | Sig. | Statistic | df | Sig. |
| Decision | Proscriptive | .259 | 58 | .000 | .836 | 58 | .000 |
| | Prescriptive | .268 | 58 | .000 | .780 | 58 | .000 |

a. Lilliefors Significance Correction

Because the buying decisions has a violation on the normal distribution in the prescriptive group and proscriptive group, so the nonparametric test has been conducted as the robustness check for the difference between groups. The result is consistent with the T-test's result.

- The nonparametric test for the buying decisions' difference between the prescriptive group and proscriptive group:

| Hypothesis Test Summary | | | | |
|-------------------------|---|---|------|-----------------------------|
| | Null Hypothesis | Test | Sig. | Decision |
| 1 | The distribution of De is the same across categories of PrePro. | Independent-Samples Mann-Whitney U Test | .000 | Reject the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

Appendix 5.2 Study one: the ANOVA on impulsiveness trait

Descriptives

Impulsiveness Trait

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|-------|-----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| Pro | 45 | 2.7530 | .72821 | .10855 | 2.5343 | 2.9718 | 1.00 | 4.00 |
| Pre | 45 | 2.6914 | .73010 | .10884 | 2.4720 | 2.9107 | 1.33 | 3.89 |
| Con | 45 | 2.4132 | .66680 | .09940 | 2.2129 | 2.6135 | 1.00 | 4.00 |
| Total | 135 | 2.6192 | .71914 | .06189 | 2.4968 | 2.7416 | 1.00 | 4.00 |

Test of Homogeneity of Variances

Impulsiveness Trait

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| 1.710 | 2 | 132 | .185 |

Impulsiveness Trait

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|-------|------|
| Between Groups | 2.950 | 2 | 1.475 | 2.934 | .057 |
| Within Groups | 66.350 | 132 | .503 | | |
| Total | 69.300 | 134 | | | |

Appendix 5.3 Study one: Tukey's test on impulsiveness trait

Tukey

| (I) | (J) | Mean | Std. Error | Sig. | 95% Confidence Interval | |
|--------------|--------------|------------------|------------|------|-------------------------|-------------|
| | | Difference (I-J) | | | Lower Bound | Upper Bound |
| Proscriptive | Proscriptive | .0617 | .14947 | .910 | -.2926 | .4160 |
| | Control | .3398 | .14947 | .063 | -.0145 | .6941 |
| Prescriptive | Proscriptive | -.0617 | .14947 | .910 | -.4160 | .2926 |
| | Control | .2781 | .14947 | .154 | -.0762 | .6324 |
| Control | Proscriptive | -.3398 | .14947 | .063 | -.6941 | .0145 |
| | Prescriptive | -.2781 | .14947 | .154 | -.6324 | .0762 |

. Based on observed means.

The error term is Mean Square (Error) = .503

Appendix 5.4 Study one: the ANOVA and Tukey on impulsiveness trait dependent on locations

ANOVA:

Descriptives

Impulsiveness Trait

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|--------|-----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| ML | 39 | 2.7010 | .67547 | .10680 | 2.4786 | 2.9106 | 1.67 | 4.00 |
| Guild | 43 | 2.4832 | .69340 | .10574 | 2.2698 | 2.6966 | 1.00 | 4.00 |
| BBS | 28 | 2.5913 | .70544 | .13576 | 2.3177 | 2.8759 | 1.44 | 3.67 |
| Others | 25 | 2.7568 | .83824 | .16765 | 2.4107 | 3.1028 | 1.00 | 4.00 |
| Total | 135 | 2.6192 | .71914 | .06189 | 2.4968 | 2.7416 | 1.00 | 4.00 |

Test of Homogeneity of Variances

Impulsiveness Trait

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| .877 | 3 | 131 | .455 |

Impulsiveness Trait

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|-------|------|
| Between Groups | 1.551 | 3 | .517 | 1.000 | .395 |
| Within Groups | 67.748 | 131 | .517 | | |
| Total | 69.300 | 134 | | | |

Tukey:

Multiple Comparisons

Dependent Variable: Impulsiveness Trait

Tukey HSD

| (I) Location | (J) Location | Mean Difference | | Sig. | 95% Confidence Interval | |
|--------------|--------------|-----------------|------------|------|-------------------------|-------------|
| | | (I-J) | Std. Error | | Lower Bound | Upper Bound |
| ML | Guild | .21782 | .15902 | .521 | -.1960 | .6316 |
| | BBS | .10965 | .17813 | .927 | -.3539 | .5732 |
| | Others | -.05576 | .18425 | .990 | -.5352 | .4237 |
| Guild | ML | -.21782 | .15902 | .521 | -.6316 | .1960 |
| | BBS | -.10817 | .17463 | .926 | -.5626 | .3463 |
| | Others | -.27358 | .18087 | .433 | -.7443 | .1971 |
| BBS | ML | -.10965 | .17813 | .927 | -.5732 | .3539 |
| | Guild | .10817 | .17463 | .926 | -.3463 | .5626 |
| | Others | -.16541 | .19788 | .837 | -.6804 | .3495 |
| Others | ML | .05576 | .18425 | .990 | -.4237 | .5352 |
| | Guild | .27358 | .18087 | .433 | -.1971 | .7443 |
| | BBS | .16541 | .19788 | .837 | -.3495 | .6804 |

Impulsiveness Trait

Tukey HSD^{a,b}

| Location | N | Subset for alpha = 0.05 | |
|----------|----|-------------------------|--|
| | | 1 | |
| Guild | 43 | 2.4832 | |
| BBS | 28 | 2.5913 | |
| ML | 39 | 2.7010 | |
| Others | 25 | 2.7568 | |
| Sig. | | .426 | |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 32.100.

b. The group sizes are unequal. The harmonic mean of the group sizes is used.

Type I error levels are not guaranteed.

Appendix 5.5 Study one: the ANOVA and Tukey on decisions dependent on locations

ANOVA:

Descriptives

| Decision | | | | | | | | |
|----------|-----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
| | | | | | Lower Bound | Upper Bound | | |
| ML | 39 | 2.3590 | .98189 | .15525 | 2.0860 | 2.7140 | 1.00 | 5.00 |
| Guild | 43 | 2.1163 | .82258 | .12544 | 1.8631 | 2.3694 | 1.00 | 5.00 |
| BBS | 28 | 2.0714 | .78446 | .15097 | 1.6897 | 2.3103 | 1.00 | 4.00 |
| Others | 25 | 2.4800 | 1.19443 | .23889 | 1.9870 | 2.9730 | 1.00 | 5.00 |
| Total | 135 | 2.2444 | .94999 | .08176 | 2.0827 | 2.4062 | 1.00 | 5.00 |

Test of Homogeneity of Variances

| Decision | | | | |
|------------------|-----|-----|------|--|
| Levene Statistic | df1 | df2 | Sig. | |
| 2.217 | 3 | 131 | .089 | |

| Decision | | | | | |
|----------------|----------------|-----|-------------|-------|------|
| | Sum of Squares | df | Mean Square | F | Sig. |
| Between Groups | 3.443 | 3 | 1.148 | 1.280 | .284 |
| Within Groups | 117.490 | 131 | .897 | | |
| Total | 120.933 | 134 | | | |

Tukey:

Multiple Comparisons

Dependent Variable: Decision

Tukey HSD

| (I) Location | (J) Location | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|--------------|--------------|--------------------------|------------|------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| ML | Guild | .24270 | .20941 | .654 | -.3023 | .7877 |
| | BBS | .28755 | .23458 | .612 | -.3229 | .8980 |
| | Others | -.12103 | .24263 | .959 | -.7524 | .5104 |
| Guild | ML | -.24270 | .20941 | .654 | -.7877 | .3023 |
| | BBS | .04485 | .22998 | .997 | -.5536 | .6433 |
| | Others | -.36372 | .23819 | .424 | -.9836 | .2561 |
| BBS | ML | -.28755 | .23458 | .612 | -.8980 | .3229 |
| | Guild | -.04485 | .22998 | .997 | -.6433 | .5536 |
| | Others | -.40857 | .26059 | .401 | -1.0867 | .2696 |
| Others | ML | .12103 | .24263 | .959 | -.5104 | .7524 |
| | Guild | .36372 | .23819 | .424 | -.2561 | .9836 |
| | BBS | .40857 | .26059 | .401 | -.2696 | 1.0867 |

Decision

Tukey HSD^{a,b}

| Location | N | Subset for alpha = 0.05 |
|----------|----|-------------------------|
| | | 1 |
| BBS | 28 | 2.0714 |
| Guild | 43 | 2.1163 |
| ML | 39 | 2.3590 |
| Others | 25 | 2.4800 |
| Sig. | | .313 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 32.100.

b. The group sizes are unequal. The harmonic mean of the group sizes is used.

Type I error levels are not guaranteed.

Appendix 5.6 Study one: the ANOVA and Tukey on impulsiveness trait dependent on weeks

ANOVA:

Descriptives

Impulsiveness Trait

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|--------|-----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| Week 1 | 29 | 2.5708 | .65299 | .12126 | 2.3225 | 2.8192 | 1.67 | 4.00 |
| Week 2 | 53 | 2.6122 | .67671 | .09295 | 2.4257 | 2.7987 | 1.00 | 4.00 |
| Week 3 | 53 | 2.6527 | .80166 | .11012 | 2.4317 | 2.8736 | 1.00 | 4.00 |
| Total | 135 | 2.6192 | .71914 | .06189 | 2.4968 | 2.7416 | 1.00 | 4.00 |

Test of Homogeneity of Variances

Impulsiveness Trait

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| 2.083 | 2 | 132 | .129 |

Impulsiveness Trait

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|------|------|
| Between Groups | .130 | 2 | .065 | .124 | .884 |
| Within Groups | 69.170 | 132 | .524 | | |
| Total | 69.300 | 134 | | | |

Tukey:

Multiple Comparisons

Dependent Variable: Impulsiveness Trait

Tukey HSD

| (I) Week | (J) Week | Mean Difference | | Sig. | 95% Confidence Interval | |
|----------|----------|-----------------|------------|------|-------------------------|-------------|
| | | (I-J) | Std. Error | | Lower Bound | Upper Bound |
| Week 1 | Week 2 | -.04134 | .16720 | .967 | -.4377 | .3550 |
| | Week 3 | -.08184 | .16720 | .876 | -.4782 | .3145 |
| Week 2 | Week 1 | .04134 | .16720 | .967 | -.3550 | .4377 |
| | Week 3 | -.04050 | .14062 | .955 | -.3738 | .2928 |
| Week 3 | Week 1 | .08184 | .16720 | .876 | -.3145 | .4782 |
| | Week 2 | .04050 | .14062 | .955 | -.2928 | .3738 |

Impulsiveness traits

Tukey HSD^{a,b}

| Week | N | Subset for alpha = 0.05 | |
|--------|----|-------------------------|--|
| | | 1 | |
| Week 1 | 29 | 2.5708 | |
| Week 2 | 53 | 2.6122 | |
| Week 3 | 53 | 2.6527 | |
| Sig. | | .864 | |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 41.541.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Appendix 5.7 Study one: the ANOVA and Tukey on decisions dependent on weeks

ANOVA:

Descriptives

| Decision | | | | | | | | |
|----------|-----|--------|-------------------|------------|-------------------------------------|-------------|---------|---------|
| | | | | | 95% Confidence Interval for Mean | | | |
| | N | Mean | Std. Deviation | Std. Error | Lower Bound | Upper Bound | Minimum | Maximum |
| Week 1 | 29 | 2.2069 | .90156 | .16742 | 1.8640 | 2.5498 | 1.00 | 5.00 |
| Week 2 | 53 | 2.2075 | .92733 | .12738 | 1.9519 | 2.4632 | 1.00 | 5.00 |
| Week 3 | 53 | 2.3019 | 1.01119 | .13890 | 2.0232 | 2.5806 | 1.00 | 5.00 |
| Total | 135 | 2.2444 | .94999 | .08176 | 2.0827 | 2.4062 | 1.00 | 5.00 |

Test of Homogeneity of Variances

| Decision | | | | |
|------------------|-----|-----|------|--|
| Levene Statistic | df1 | df2 | Sig. | |
| .393 | 2 | 132 | .676 | |

| Decision | | | | | |
|----------------|----------------|-----|-------------|------|------|
| | Sum of Squares | df | Mean Square | F | Sig. |
| Between Groups | .288 | 2 | .144 | .158 | .854 |
| Within Groups | 120.645 | 132 | .914 | | |
| Total | 120.933 | 134 | | | |

Tukey:

Multiple Comparisons

Dependent Variable: Decision

Tukey HSD

| (I) Week | (J) Week | Mean Difference | | Sig. | 95% Confidence Interval | |
|----------|----------|-----------------|------------|-------|-------------------------|-------------|
| | | (I-J) | Std. Error | | Lower Bound | Upper Bound |
| Week 1 | Week 2 | -.00065 | .22082 | 1.000 | -.5241 | .5228 |
| | Week 3 | -.09499 | .22082 | .903 | -.6184 | .4285 |
| Week 2 | Week 1 | .00065 | .22082 | 1.000 | -.5228 | .5241 |
| | Week 3 | -.09434 | .18571 | .868 | -.5346 | .3459 |
| Week 3 | Week 1 | .09499 | .22082 | .903 | -.4285 | .6184 |
| | Week 2 | .09434 | .18571 | .868 | -.3459 | .5346 |

Decision

Tukey HSD^{a,b}

| Week | N | Subset for alpha = 0.05 | |
|--------|----|-------------------------|--|
| | | 1 | |
| Week 1 | 29 | 2.2069 | |
| Week 2 | 53 | 2.2075 | |
| Week 3 | 53 | 2.3019 | |
| Sig. | | .893 | |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 41.541.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Appendix 5.8 Study one: the ANOVA and T-test on impulsiveness trait dependent on gender

ANOVA:

Descriptives

Impulsiveness Trait

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|--------|-----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| Male | 55 | 2.6165 | .69806 | .09413 | 2.4278 | 2.8052 | 1.00 | 4.00 |
| Female | 80 | 2.6211 | .73765 | .08247 | 2.4569 | 2.7852 | 1.00 | 4.00 |
| Total | 135 | 2.6192 | .71914 | .06189 | 2.4968 | 2.7416 | 1.00 | 4.00 |

Test of Homogeneity of Variances

Impulsiveness Trait

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| .552 | 1 | 133 | .459 |

Impulsiveness Trait

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|------|------|
| Between Groups | .001 | 1 | .001 | .001 | .971 |
| Within Groups | 69.299 | 133 | .521 | | |
| Total | 69.300 | 134 | | | |

T-test:

Group Statistics

| | Gender | N | Mean | Std. Deviation | Std. Error Mean |
|---------------------|--------|----|--------|----------------|-----------------|
| Impulsiveness Trait | Male | 55 | 2.6165 | .69806 | .09413 |
| | Female | 80 | 2.6211 | .73765 | .08247 |

Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | 95% Confidence Interval of the Difference | |
|------------------------|--------------------------------------|---|------|------------------------------|---------|---------------------|--------------------|--------------------------|---|--------|
| | | F | Sig. | t | df | Sig. (2- tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Impulsiveness Trait | Equal variances assumed | .552 | .459 | -.037 | 133 | .971 | -.00462 | .12644 | -.25471 | .24547 |
| | Equal variances not assumed | | | -.037 | 120.280 | .971 | -.00462 | .12515 | -.25239 | .24315 |

Appendix 5.9 Study one: the ANOVA and T-test on impulsive buying decisions dependent on gender

ANOVA:

Descriptives

Decision

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|--------|-----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| Male | 55 | 2.1636 | .81112 | .10937 | 1.9444 | 2.3829 | 1.00 | 5.00 |
| Female | 80 | 2.3000 | 1.03606 | .11583 | 2.0694 | 2.5306 | 1.00 | 5.00 |
| Total | 135 | 2.2444 | .94999 | .08176 | 2.0827 | 2.4062 | 1.00 | 5.00 |

Test of Homogeneity of Variances

Decision

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| 3.842 | 1 | 133 | .052 |

Decision

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|------|------|
| Between Groups | .606 | 1 | .606 | .670 | .415 |
| Within Groups | 120.327 | 133 | .905 | | |
| Total | 120.933 | 134 | | | |

T-Test:

Group Statistics

| | Gender | N | Mean | Std. Deviation | Std. Error Mean |
|----------|--------|----|--------|----------------|-----------------|
| Decision | Male | 55 | 2.1636 | .81112 | .10937 |
| | Female | 80 | 2.3000 | 1.03606 | .11583 |

Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | 95% Confidence Interval of the Difference | |
|----------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|--|---|--------|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | | Lower | Upper |
| Decision | Equal variances assumed | 3.842 | .052 | -.818 | 133 | .415 | -.13636 | .16661 | | -.46591 | .19318 |
| | Equal variances not assumed | | | -.856 | 130.689 | .394 | -.13636 | .15931 | | -.45152 | .17880 |

Appendix 5.10 Study one: the ANOVA and T-test of the impulsive buying decisions

ANOVA:

Descriptives

| Decision | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|----------|----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| Pro | 45 | 1.7556 | .43461 | .06479 | 1.6250 | 1.8861 | 1.00 | 2.00 |
| Pre | 45 | 2.7111 | .94441 | .14079 | 2.4274 | 2.9948 | 1.00 | 5.00 |
| Total | 90 | 2.2333 | .87474 | .09221 | 2.0501 | 2.4165 | 1.00 | 5.00 |

Test of Homogeneity of Variances

| Decision | Levene Statistic | df1 | df2 | Sig. |
|----------|------------------|-----|-----|------|
| | 18.255 | 1 | 88 | .000 |

ANOVA

| Decision | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|--------|------|
| Between Groups | 20.544 | 1 | 20.544 | 38.017 | .000 |
| Within Groups | 47.556 | 88 | .540 | | |
| Total | 68.100 | 89 | | | |

T-test:

Group Statistics

| | PreProControl | N | Mean | Std. Deviation | Std. Error Mean |
|----------|---------------|----|--------|----------------|-----------------|
| Decision | Pro | 45 | 1.7556 | .43461 | .06479 |
| | Pre | 45 | 2.7111 | .94441 | .14079 |

Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | 95% Confidence Interval of the Difference | |
|----------|--------------------------------------|---|------|------------------------------|--------|---------------------|--------------------|--------------------------|---|---------|
| | | F | Sig. | t | df | Sig. (2- tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Decision | Equal variances assumed | 18.255 | .000 | -6.166 | 88 | .000 | -.95556 | .15498 | -1.26354 | -.64757 |
| | Equal variances not assumed | | | -6.166 | 61.837 | .000 | -.95556 | .15498 | -1.26537 | -.64574 |

Appendix 5.11 Study two: the ANOVA and Tukey on impulsive urge dependent on locations

ANOVA:

Descriptives

Urge

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|--------|-----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| ML | 63 | 3.7183 | 1.32874 | .16741 | 3.3916 | 4.0608 | 1.00 | 6.50 |
| Guild | 42 | 3.9881 | 1.26973 | .19592 | 3.5805 | 4.3719 | 1.00 | 6.25 |
| BBS | 6 | 5.0000 | .54006 | .22048 | 4.0999 | 5.2334 | 4.00 | 5.50 |
| Others | 21 | 4.0476 | 1.14447 | .24974 | 3.6219 | 4.6638 | 1.25 | 6.25 |
| Total | 132 | 3.9148 | 1.26643 | .11023 | 3.6967 | 4.1328 | 1.00 | 6.50 |

Test of Homogeneity of Variances

| | Levene Statistic | df1 | df2 | Sig. |
|------|------------------|-----|-----|------|
| Urge | 1.363 | 3 | 128 | .257 |

| | | Sum of Squares | df | Mean Square | F | Sig. |
|------|----------------|----------------|-----|-------------|-------|------|
| Urge | Between Groups | 10.096 | 3 | 3.365 | 1.961 | .123 |
| | Within Groups | 219.633 | 128 | 1.716 | | |
| | Total | 229.729 | 131 | | | |

Tukey:

Multiple Comparisons

Tukey HSD

| Dependent Variable | (I) Locations | (J) Locations | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|--------------------|---------------|---------------|-----------------------|------------|------|-------------------------|-------------|
| | | | | | | Lower Bound | Upper Bound |
| Urge | ML | Guild | -.26984 | .26094 | .730 | -.9491 | .4094 |
| | | BBS | -1.28175 | .55966 | .106 | -2.7386 | .1751 |
| | | Others | -.32937 | .33007 | .751 | -1.1886 | .5298 |
| | Guild | ML | .26984 | .26094 | .730 | -.4094 | .9491 |
| | | BBS | -1.01190 | .57169 | .293 | -2.5001 | .4763 |
| | | Others | -.05952 | .35009 | .998 | -.9708 | .8518 |
| | BBS | ML | 1.28175 | .55966 | .106 | -.1751 | 2.7386 |
| | | Guild | 1.01190 | .57169 | .293 | -.4763 | 2.5001 |
| | | Others | .95238 | .60637 | .399 | -.6261 | 2.5308 |
| | Others | ML | .32937 | .33007 | .751 | -.5298 | 1.1886 |
| | | Guild | .05952 | .35009 | .998 | -.8518 | .9708 |
| | | BBS | -.95238 | .60637 | .399 | -2.5308 | .6261 |

Urge

Tukey HSD^{a,b}

| Locations | N | Subset for alpha = 0.05 | |
|-----------|----|-------------------------|--------|
| | | 1 | 2 |
| ML | 63 | 3.7183 | |
| Guild | 42 | 3.9881 | 3.9881 |
| Others | 21 | 4.0476 | 4.0476 |
| BBS | 6 | | 5.0000 |
| Sig. | | .895 | .138 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 15.750.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Appendix 5.12 Study two: the ANOVA and Tukey on impulsive buying decisions dependent on locations

ANOVA:

Descriptives

| Decision | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|----------|-----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| ML | 63 | 2.4762 | 1.25683 | .15835 | 2.7152 | 3.3483 | 1.00 | 6.00 |
| Guild | 42 | 2.2619 | 1.13236 | .17473 | 2.9328 | 3.6386 | 1.00 | 6.00 |
| BBS | 6 | 2.8333 | .51640 | .21082 | 3.1247 | 4.2086 | 3.00 | 4.00 |
| Others | 21 | 2.4286 | 1.15470 | .25198 | 3.1411 | 4.1923 | 1.00 | 6.00 |
| Total | 132 | 3.2424 | 1.19235 | .10378 | 3.0371 | 3.4477 | 1.00 | 6.00 |

Test of Homogeneity of Variances

| | Levene Statistic | df1 | df2 | Sig. |
|-----------------------|------------------|-----|-----|------|
| DecisionPreProControl | 1.355 | 3 | 128 | .260 |

| | | Sum of Squares | df | Mean Square | F | Sig. |
|-----------------------|----------------|----------------|-----|-------------|------|------|
| DecisionPreProControl | Between Groups | 2.274 | 3 | .758 | .704 | .551 |
| | Within Groups | 137.810 | 128 | 1.077 | | |
| | Total | 140.083 | 131 | | | |

Tukey:

Multiple Comparisons

Tukey HSD

| Dependent Variable | (I) Locations | (J) Locations | Mean | Std. Error | Sig. | 95% Confidence Interval | |
|--------------------|------------------|------------------|------------------|------------|------|-------------------------|-------------|
| | | | Difference (I-J) | | | Lower Bound | Upper Bound |
| Decision | ML | Guild | .21429 | .20670 | .728 | -.3238 | .7523 |
| | | BBS | -.35714 | .44332 | .852 | -1.5111 | .7969 |
| | | Others | .04762 | .26145 | .998 | -.6330 | .7282 |
| | Guild | ML | -.21429 | .20670 | .728 | -.7523 | .3238 |
| | | BBS | -.57143 | .45285 | .589 | -1.7502 | .6074 |
| | | Others | -.16667 | .27731 | .932 | -.8885 | .5552 |
| | BBS | ML | .35714 | .44332 | .852 | -.7969 | 1.5111 |
| | | Guild | .57143 | .45285 | .589 | -.6074 | 1.7502 |
| | | Others | .40476 | .48032 | .834 | -.8456 | 1.6551 |
| | Others | ML | -.04762 | .26145 | .998 | -.7282 | .6330 |
| | | Guild | .16667 | .27731 | .932 | -.5552 | .8885 |
| | | BBS | -.40476 | .48032 | .834 | -1.6551 | .8456 |
| | | BBS | -.95238 | .60637 | .399 | -2.5308 | .6261 |

Decision

Tukey HSD^{a,b}

| Locations | N | Subset for alpha = 0.05 |
|-----------|----|-------------------------|
| | | 1 |
| Guild | 42 | 2.2619 |
| Others | 21 | 2.4286 |
| ML | 63 | 2.4762 |
| BBS | 6 | 2.8333 |
| Sig. | | .414 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 15.750.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Appendix 5.13 Study two: the ANOVA and Tukey on impulsive urge dependent on weeks

ANOVA:

Descriptives

Urge

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|-------------|-----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| First Week | 37 | 3.5811 | 1.33653 | .21972 | 3.2030 | 4.0943 | 1.00 | 6.00 |
| Second Week | 36 | 3.9028 | 1.20490 | .20082 | 3.5507 | 4.3660 | 1.25 | 6.25 |
| Third Week | 18 | 4.2778 | 1.09188 | .25736 | 3.5542 | 4.6402 | 2.25 | 6.00 |
| Eighth Week | 32 | 4.0859 | 1.35949 | .24033 | 3.5333 | 4.5136 | 1.00 | 6.50 |
| Ninth Week | 9 | 4.0000 | 1.29904 | .43301 | 3.0848 | 5.0819 | 2.25 | 5.75 |
| Total | 132 | 3.9148 | 1.26643 | .11023 | 3.6967 | 4.1328 | 1.00 | 6.50 |

Test of Homogeneity of Variances

| | Levene Statistic | df1 | df2 | Sig. |
|------|------------------|-----|-----|------|
| Urge | .321 | 4 | 127 | .864 |

| | | Sum of Squares | df | Mean Square | F | Sig. |
|------|----------------|----------------|-----|-------------|-------|------|
| Urge | Between Groups | 7.500 | 4 | 1.875 | 1.072 | .373 |
| | Within Groups | 222.229 | 127 | 1.750 | | |
| | Total | 229.729 | 131 | | | |

Tukey:

Multiple Comparisons

Tukey HSD

| Dependent Variable | (I) Week | (J) Week | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|--------------------|-------------|-------------|-----------------------|------------|-------|-------------------------|-------------|
| | | | | | | Lower Bound | Upper Bound |
| Urge | First Week | Second Week | -.32170 | .30968 | .837 | -1.1787 | .5353 |
| | | Third Week | -.69670 | .38014 | .359 | -1.7487 | .3553 |
| | | Eighth Week | -.50486 | .31934 | .512 | -1.3886 | .3789 |
| | | Ninth Week | -.41892 | .49165 | .914 | -1.7795 | .9417 |
| | Second Week | First Week | .32170 | .30968 | .837 | -.5353 | 1.1787 |
| | | Third Week | -.37500 | .38186 | .863 | -1.4318 | .6818 |
| | | Eighth Week | -.18316 | .32139 | .979 | -1.0725 | .7062 |
| | | Ninth Week | -.09722 | .49298 | 1.000 | -1.4615 | 1.2670 |
| | Third Week | First Week | .69670 | .38014 | .359 | -.3553 | 1.7487 |
| | | Second Week | .37500 | .38186 | .863 | -.6818 | 1.4318 |
| | | Eighth Week | .19184 | .38974 | .988 | -.8867 | 1.2704 |
| | | Ninth Week | .27778 | .54004 | .986 | -1.2167 | 1.7723 |
| | Eighth Week | First Week | .50486 | .31934 | .512 | -.3789 | 1.3886 |
| | | Second Week | .18316 | .32139 | .979 | -.7062 | 1.0725 |
| | | Third Week | -.19184 | .38974 | .988 | -1.2704 | .8867 |
| | | Ninth Week | .08594 | .49911 | 1.000 | -1.2953 | 1.4671 |
| | Ninth Week | First Week | .41892 | .49165 | .914 | -.9417 | 1.7795 |
| | | Second Week | .09722 | .49298 | 1.000 | -1.2670 | 1.4615 |
| | | Third Week | -.27778 | .54004 | .986 | -1.7723 | 1.2167 |
| | | Eighth Week | -.08594 | .49911 | 1.000 | -1.4671 | 1.2953 |

Urge

Tukey HSD^{a,b}

| Week | N | Subset for alpha = 0.05 | |
|-------------|----|-------------------------|--|
| | | 1 | |
| First Week | 37 | 3.5811 | |
| Second Week | 36 | 3.9028 | |
| Ninth Week | 9 | 4.0000 | |
| Eighth Week | 32 | 4.0859 | |
| Third Week | 18 | 4.2778 | |
| Sig. | | .465 | |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 19.785.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Appendix 5.14 Study two: the ANOVA and Tukey on impulsive buying decisions dependent on weeks

ANOVA:

Descriptives

Decision

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|-------------|-----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| First Week | 37 | 2.5946 | 1.16570 | .19164 | 2.2059 | 2.9833 | 1.00 | 5.00 |
| Second Week | 36 | 2.2500 | .87423 | .14571 | 1.9542 | 2.5458 | 1.00 | 5.00 |
| Third Week | 18 | 2.4444 | .92178 | .21726 | 1.9861 | 2.9028 | 1.00 | 5.00 |
| Eighth Week | 32 | 2.4688 | 1.16354 | .20569 | 2.0492 | 2.8883 | 1.00 | 5.00 |
| Ninth Week | 9 | 2.1111 | .78174 | .26058 | 1.5102 | 2.7120 | 1.00 | 3.00 |
| Total | 132 | 2.4167 | 1.03409 | .09001 | 2.2386 | 2.5947 | 1.00 | 5.00 |

Test of Homogeneity of Variances

| | Levene Statistic | df1 | df2 | Sig. |
|----------|------------------|-----|-----|------|
| Decision | 1.255 | 4 | 127 | .291 |

| | | Sum of Squares | df | Mean Square | F | Sig. |
|----------|----------------|----------------|-----|-------------|------|------|
| Decision | Between Groups | 3.112 | 4 | .778 | .721 | .579 |
| | Within Groups | 136.971 | 127 | 1.079 | | |
| | Total | 140.083 | 131 | | | |

Tukey:

Multiple Comparisons

Tukey HSD

| Dependent Variable | (I) Week | (J) Week | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|--------------------|-------------|-------------|-----------------------|------------|-------|-------------------------|-------------|
| | | | | | | Lower Bound | Upper Bound |
| Decision | First Week | Second Week | .34459 | .24312 | .618 | -.3282 | 1.0174 |
| | | Third Week | .15015 | .29844 | .987 | -.6757 | .9760 |
| | | Eighth Week | .12584 | .25070 | .987 | -.5679 | .8196 |
| | | Ninth Week | .48348 | .38598 | .720 | -.5847 | 1.5516 |
| | Second Week | First Week | -.34459 | .24312 | .618 | -1.0174 | .3282 |
| | | Third Week | -.19444 | .29979 | .967 | -1.0241 | .6352 |
| | | Eighth Week | -.21875 | .25231 | .908 | -.9170 | .4795 |
| | | Ninth Week | .13889 | .38703 | .996 | -.9322 | 1.2099 |
| | Third Week | First Week | -.15015 | .29844 | .987 | -.9760 | .6757 |
| | | Second Week | .19444 | .29979 | .967 | -.6352 | 1.0241 |
| | | Eighth Week | -.02431 | .30598 | 1.000 | -.8710 | .8224 |
| | | Ninth Week | .33333 | .42397 | .934 | -.8399 | 1.5066 |
| | Eighth Week | First Week | -.12584 | .25070 | .987 | -.8196 | .5679 |
| | | Second Week | .21875 | .25231 | .908 | -.4795 | .9170 |
| | | Third Week | .02431 | .30598 | 1.000 | -.8224 | .8710 |
| | | Ninth Week | .35764 | .39184 | .892 | -.7267 | 1.4420 |
| | Ninth Week | First Week | -.48348 | .38598 | .720 | -1.5516 | .5847 |
| | | Second Week | -.13889 | .38703 | .996 | -1.2099 | .9322 |
| | | Third Week | -.33333 | .42397 | .934 | -1.5066 | .8399 |
| | | Eighth Week | -.35764 | .39184 | .892 | -1.4420 | .7267 |

Decision

Tukey HSD^{a,b}

| Week | N | Subset for alpha = 0.05 | |
|-------------|----|-------------------------|--|
| | | 1 | |
| Ninth Week | 9 | 2.1111 | |
| Second Week | 36 | 2.2500 | |
| Third Week | 18 | 2.4444 | |
| Eighth Week | 32 | 2.4688 | |
| First Week | 37 | 2.5946 | |
| Sig. | | .587 | |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 19.785.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Appendix 5.15 Study two: the ANOVA and T-test on impulsive urge dependent on gender

ANOVA:

Descriptives

Urge

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|--------|-----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| Male | 63 | 3.8532 | 1.32944 | .16749 | 3.5184 | 4.1880 | 1.00 | 6.50 |
| Female | 69 | 4.0435 | 1.29830 | .15630 | 3.7316 | 4.3554 | 1.00 | 6.50 |
| Total | 132 | 3.9527 | 1.31170 | .11417 | 3.7268 | 4.1785 | 1.00 | 6.50 |

Test of Homogeneity of Variances

Urge

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| .808 | 1 | 130 | .370 |

Urge

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|------|------|
| Between Groups | .457 | 1 | .457 | .259 | .611 |
| Within Groups | 229.271 | 130 | 1.764 | | |
| Total | 229.729 | 131 | | | |

T-Test:

Group Statistics

| | Gender | N | Mean | Std. Deviation | Std. Error Mean |
|------|--------|----|--------|----------------|-----------------|
| Urge | Male | 63 | 3.8532 | 1.32944 | .16749 |
| | Female | 69 | 3.9710 | 1.32672 | .15972 |

Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | 95% Confidence Interval of the Difference | |
|------|--------------------------------------|---|------|------------------------------|---------|---------------------|--------------------|--------------------------|---|--------|
| | | F | Sig. | t | df | Sig. (2- tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Urge | Equal variances assumed | .808 | .370 | -.509 | 130 | .611 | -.11784 | .23142 | -.57567 | .33999 |
| | Equal variances not assumed | | | -.509 | 128.867 | .612 | -.11784 | .23144 | -.57575 | .34007 |

Appendix 5.16 Study two: the ANOVA and T-test on impulsive buying decisions dependent on gender

ANOVA:

Descriptives

Decision

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|--------|-----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| Male | 63 | 2.3810 | 1.06904 | .13469 | 2.1117 | 2.6502 | 1.00 | 5.00 |
| Female | 69 | 2.4493 | 1.00785 | .12133 | 2.2072 | 2.6914 | 1.00 | 5.00 |
| Total | 132 | 2.4167 | 1.03409 | .09001 | 2.2386 | 2.5947 | 1.00 | 5.00 |

Test of Homogeneity of Variances

Decision

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| .231 | 1 | 130 | .632 |

Decision

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|------|------|
| Between Groups | .154 | 1 | .154 | .143 | .706 |
| Within Groups | 139.930 | 130 | 1.076 | | |
| Total | 140.083 | 131 | | | |

T-Test:

Group Statistics

| | Gender | N | Mean | Std. Deviation | Std. Error Mean |
|----------|--------|----|--------|----------------|-----------------|
| Decision | Male | 63 | 2.3810 | 1.06904 | .13469 |
| | Female | 69 | 2.4493 | 1.00785 | .12133 |

Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | 95% Confidence Interval of the Difference | |
|----------|--------------------------------------|---|------|------------------------------|---------|---------------------|--------------------|--------------------------|---|--------|
| | | F | Sig. | t | df | Sig. (2- tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Decision | Equal variances assumed | .231 | .632 | -.378 | 130 | .706 | -.06832 | .18079 | -.42600 | .28935 |
| | Equal variances not assumed | | | -.377 | 127.126 | .707 | -.06832 | .18128 | -.42704 | .29039 |

Appendix 5.17 Study two: the ANOVA on the impulsive urge and buying decision

| Descriptives | | | | | | | | | |
|--------------|-------|-----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
| | | | | | | Lower Bound | Upper Bound | | |
| Urge | Pro | 51 | 3.2843 | 1.20418 | .16862 | 2.9456 | 3.6230 | 1.00 | 5.50 |
| | Pre | 50 | 4.4100 | 1.36161 | .19256 | 4.0230 | 4.7970 | 1.75 | 6.50 |
| | Total | 101 | 3.8416 | 1.39764 | .13907 | 3.5657 | 4.1175 | 1.00 | 6.50 |
| Decision | Pro | 51 | 1.9412 | .81023 | .11345 | 1.7133 | 2.1691 | 1.00 | 5.00 |
| | Pre | 50 | 2.9800 | 1.09712 | .15516 | 2.6682 | 3.2918 | 1.00 | 5.00 |
| | Total | 101 | 2.4554 | 1.09110 | .10857 | 2.2400 | 2.6708 | 1.00 | 5.00 |

Test of Homogeneity of Variances

| | Levene Statistic | df1 | df2 | Sig. |
|----------|------------------|-----|-----|------|
| Urge | 1.499 | 1 | 99 | .224 |
| Decision | 3.790 | 1 | 99 | .054 |

ANOVA

| | | Sum of Squares | df | Mean Square | F | Sig. |
|----------|----------------|----------------|-----|-------------|--------|------|
| Urge | Between Groups | 31.993 | 1 | 31.993 | 19.390 | .000 |
| | Within Groups | 163.347 | 99 | 1.650 | | |
| | Total | 195.340 | 100 | | | |
| Decision | Between Groups | 27.246 | 1 | 27.246 | 29.382 | .000 |
| | Within Groups | 91.804 | 99 | .927 | | |
| | Total | 119.050 | 100 | | | |

Appendix 5.18 Study two: the T-test of the impulsive urge and buying decision in (prescriptive, proscriptive) * (descriptive, injunctive) groups

- The T-test for the impulsive urge and buying decisions of prescriptive group and proscriptive group, under the descriptive norms

| Group Statistics | | | | | |
|------------------|-----------|----|--------|----------------|-----------------|
| | Scenarios | N | Mean | Std. Deviation | Std. Error Mean |
| Urge | S1 | 26 | 3.5192 | 1.11113 | .21791 |
| | S3 | 24 | 4.2500 | 1.38313 | .28233 |
| Decision | S1 | 26 | 2.0769 | .79614 | .15614 |
| | S3 | 24 | 2.7083 | 1.04170 | .21264 |

| Independent Samples Test | | | | | | | | | | |
|--------------------------|-----------------------------|---|------|------------------------------|--------|-----------------|-----------------|-----------------------|----------|---|
| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | 95% Confidence Interval of the Difference |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Urge | Equal variances assumed | 2.989 | .090 | -2.067 | 48 | .044 | -.73077 | .35352 | -1.44157 | -.01997 |
| | Equal variances not assumed | | | -2.049 | 44.151 | .046 | -.73077 | .35664 | -1.44947 | -.01207 |
| Decision | Equal variances assumed | 3.609 | .063 | -2.419 | 48 | .019 | -.63141 | .26099 | -1.15617 | -.10665 |
| | Equal variances not assumed | | | -2.393 | 42.991 | .021 | -.63141 | .26380 | -1.16343 | -.09939 |

- The T-test for the impulsive urge and buying decisions of prescriptive group and proscriptive group, under the injunctive norms

Group Statistics

| | Scenarios | N | Mean | Std. Deviation | Std. Error Mean |
|----------|-----------|----|--------|----------------|-----------------|
| Urge | S2 | 25 | 3.0400 | 1.27001 | .25400 |
| | S4 | 26 | 4.5577 | 1.35149 | .26505 |
| Decision | S2 | 25 | 1.8000 | .81650 | .16330 |
| | S4 | 26 | 3.2308 | 1.10662 | .21703 |

Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | 95% Confidence Interval of the Difference | |
|----------|-----------------------------|---|------|------------------------------|--------|-----------------|-----------------|-----------------------|---|---------|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Urge | Equal variances assumed | .213 | .646 | -4.129 | 49 | .000 | -1.51769 | .36756 | -2.25634 | -.77904 |
| | Equal variances not assumed | | | -4.134 | 48.976 | .000 | -1.51769 | .36711 | -2.25543 | -.77995 |
| Decision | Equal variances assumed | 2.112 | .153 | -5.237 | 49 | .000 | -1.43077 | .27321 | -1.97980 | -.88174 |
| | Equal variances not assumed | | | -5.268 | 45.972 | .000 | -1.43077 | .27160 | -1.97748 | -.88406 |

Appendix 5.19 Study two: the reliability check for the impulsive urge measurement scale

- Proscriptive * Descriptive group:

Case Processing Summary

| | | N | % |
|-------|-----------------------|-----|-------|
| Cases | Valid | 26 | 18.7 |
| | Excluded ^a | 113 | 81.3 |
| | Total | 139 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .744 | 4 |

Item Statistics

| | Mean | Std. Deviation | N |
|---------|--------|----------------|----|
| S1Urge1 | 4.1154 | 1.45126 | 26 |
| S1Urge2 | 4.2308 | 1.63236 | 26 |
| S1Urge3 | 3.3846 | 1.35873 | 26 |
| S1Urge4 | 4.7308 | 1.90909 | 26 |

Scale Statistics

| Mean | Variance | Std. Deviation | N of Items |
|---------|----------|----------------|------------|
| 16.4615 | 23.218 | 4.81855 | 4 |

- **Proscriptive * Injunctive group:**

Case Processing Summary

| | | N | % |
|-------|-----------------------|-----|-------|
| Cases | Valid | 25 | 18.0 |
| | Excluded ^a | 114 | 82.0 |
| | Total | 139 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .865 | 4 |

Item Statistics

| | Mean | Std. Deviation | N |
|---------|--------|----------------|----|
| S2Urge1 | 3.7600 | 1.61452 | 25 |
| S2Urge2 | 3.5200 | 1.53080 | 25 |
| S2Urge3 | 3.1200 | 1.71561 | 25 |
| S2Urge4 | 4.0000 | 1.77951 | 25 |

Scale Statistics

| Mean | Variance | Std. Deviation | N of Items |
|---------|----------|----------------|------------|
| 14.4000 | 31.500 | 5.61249 | 4 |

- **Prescriptive * Descriptive group:**

Case Processing Summary

| | | N | % |
|-------|-----------------------|-----|-------|
| Cases | Valid | 24 | 17.3 |
| | Excluded ^a | 115 | 82.7 |
| | Total | 139 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .889 | 4 |

Item Statistics

| | Mean | Std. Deviation | N |
|---------|--------|----------------|----|
| S3Urge1 | 4.5000 | 1.86501 | 24 |
| S3Urge2 | 4.0833 | 1.58572 | 24 |
| S3Urge3 | 3.4167 | 1.44212 | 24 |
| S3Urge4 | 4.7500 | 1.56733 | 24 |

Scale Statistics

| Mean | Variance | Std. Deviation | N of Items |
|---------|----------|----------------|------------|
| 16.7500 | 31.587 | 5.62023 | 4 |

- **Prescriptive * Injunctive group:**

Case Processing Summary

| | | N | % |
|-------|-----------------------|-----|-------|
| Cases | Valid | 26 | 18.7 |
| | Excluded ^a | 113 | 81.3 |
| | Total | 139 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .750 | 4 |

Item Statistics

| | Mean | Std. Deviation | N |
|---------|--------|----------------|----|
| S4Urge1 | 4.8077 | 1.78928 | 26 |
| S4Urge2 | 4.8462 | 1.68979 | 26 |
| S4Urge3 | 3.8462 | 1.80427 | 26 |
| S4Urge4 | 4.5769 | 1.79272 | 26 |

Scale Statistics

| Mean | Variance | Std. Deviation | N of Items |
|---------|----------|----------------|------------|
| 18.0769 | 28.634 | 5.35106 | 4 |

- **Control group:**

Case Processing Summary

| | | N | % |
|-------|-----------------------|-----|-------|
| Cases | Valid | 31 | 22.3 |
| | Excluded ^a | 108 | 77.7 |
| | Total | 139 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .700 | 4 |

Item Statistics

| | Mean | Std. Deviation | N |
|--------|--------|----------------|----|
| CUrge1 | 4.1613 | 1.50769 | 31 |
| CUrge2 | 4.2903 | 1.21638 | 31 |
| CUrge3 | 4.1935 | 1.37645 | 31 |
| CUrge4 | 4.2258 | 1.33441 | 31 |

Scale Statistics

| Mean | Variance | Std. Deviation | N of Items |
|---------|----------|----------------|------------|
| 16.8710 | 15.649 | 3.95594 | 4 |

Overall:**Case Processing Summary**

| | | N | % |
|-------|-----------------------|-----|-------|
| Cases | Valid | 132 | 95.0 |
| | Excluded ^a | 7 | 5.0 |
| | Total | 139 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .800 | 4 |

Item Statistics

| | Mean | Std. Deviation | N |
|---------|--------|----------------|-----|
| S1Urge1 | 4.2652 | 1.65709 | 132 |
| S1Urge2 | 4.2045 | 1.56165 | 132 |
| S1Urge3 | 3.6212 | 1.57039 | 132 |
| S1Urge4 | 4.4470 | 1.67749 | 132 |

Scale Statistics

| Mean | Variance | Std. Deviation | N of Items |
|---------|----------|----------------|------------|
| 16.5379 | 26.174 | 5.11607 | 4 |

Appendix 5.20 Study two: the interactive effect of different social norms on impulse buying

- The ANOVA on impulsive urge on prescriptive group, proscriptive group and the control group

Descriptives

Urge

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|--------------|-----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| Proscriptive | 51 | 3.3824 | 1.21794 | .17055 | 3.0398 | 3.7249 | 1.00 | 6.00 |
| Prescriptive | 50 | 4.4100 | 1.36161 | .19256 | 4.0230 | 4.7970 | 1.75 | 6.50 |
| Control | 31 | 4.1532 | 1.03416 | .18574 | 3.7739 | 4.5326 | 2.00 | 6.00 |
| Total | 132 | 3.9527 | 1.31170 | .11417 | 3.7268 | 4.1785 | 1.00 | 6.50 |

Test of Homogeneity of Variances

Urge

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| 2.241 | 2 | 129 | .110 |

Tests of Between-Subjects Effects

Dependent Variable: Urge

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|-----------------|-------------------------|-----|-------------|----------|------|
| Corrected Model | 28.293 ^a | 2 | 14.146 | 9.259 | .000 |
| Intercept | 1985.599 | 1 | 1985.599 | 1299.563 | .000 |
| PreProControl | 28.293 | 2 | 14.146 | 9.259 | .000 |
| Error | 197.099 | 129 | 1.528 | | |
| Total | 2287.688 | 132 | | | |
| Corrected Total | 225.392 | 131 | | | |

a. R Squared = .126 (Adjusted R Squared = .112)

(Note: Pre = Prescriptive Group's Immediate Urge; Pro = Proscriptive Group's Immediate Urge; Control = Control Group's Immediate Urge)

- The Two-way ANOVA on immediate impulsive urge in (prescriptive, proscriptive)
* (descriptive, injunctive) groups and control group

| Descriptives | | | | | | | | |
|--------------|-----|--------|----------------|------------|----------------------------------|--------|---------|---------|
| Decision | | | | | | | | |
| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
| Proscriptive | 51 | 1.9412 | .81023 | .11345 | 1.7133 | 2.1691 | 1.00 | 5.00 |
| Prescriptive | 50 | 2.9800 | 1.09712 | .15516 | 2.6682 | 3.2918 | 1.00 | 5.00 |
| Control | 31 | 2.2903 | .82436 | .14806 | 1.9879 | 2.5927 | 1.00 | 5.00 |
| Total | 132 | 2.4167 | 1.03409 | .09001 | 2.2386 | 2.5947 | 1.00 | 5.00 |

| Between-Subjects Factors | | | |
|--------------------------|-------------|--------------|----|
| | Value Label | N | |
| PrePreoCon | 1.00 | Prescriptive | 50 |
| | 2.00 | Proscriptive | 51 |
| | 3.00 | Control | 31 |
| DesInjunCon | 1.00 | Prescriptive | 50 |
| | 2.00 | Proscriptive | 51 |
| | 3.00 | Control | 31 |

Levene's Test of Equality of Error Variances^a

Dependent Variable: Urge

| F | df1 | df2 | Sig. |
|-------|-----|-----|------|
| 1.604 | 4 | 127 | .177 |

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + PreProCon + DesInjunCon + PreProCon * DesInjunCon

Tests of Between-Subjects Effects

Dependent Variable: Urge

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|-------------------------|-------------------------|-----|-------------|----------|------|
| Corrected Model | 35.222 ^a | 4 | 8.805 | 5.881 | .000 |
| Intercept | 2036.329 | 1 | 2036.329 | 1359.911 | .000 |
| PreProCon | 26.659 | 1 | 26.659 | 17.803 | .000 |
| DesInjunCon | .835 | 1 | .835 | .557 | .457 |
| PreProCon * DesInjunCon | 6.046 | 1 | 6.046 | 4.038 | .047 |
| Error | 190.170 | 127 | 1.497 | | |
| Total | 2287.688 | 132 | | | |
| Corrected Total | 225.392 | 131 | | | |

a. R Squared = .156 (Adjusted R Squared = .130)

(Note: Pre = Prescriptive Group's Immediate Urge; Pro = Proscriptive Group's Immediate Urge; Des = Descriptive Group's Immediate Urge; Injun = Injunctive Group's Immediate Urge; Control = Control Group's Immediate Urge)

- The ANOVA on impulsive buying decisions on prescriptive group, proscriptive group and the control group

Descriptives

| Decision | | | | | | | | |
|----------|-----|--------|-------------------|------------|-------------------------------------|----------------|---------|---------|
| | | | | | 95% Confidence Interval for Mean | | Minimum | Maximum |
| | N | Mean | Std. Deviation | Std. Error | Lower Bound | Upper Bound | | |
| pro | 51 | 1.9412 | .81023 | .11345 | 1.7133 | 2.1691 | 1.00 | 5.00 |
| pre | 50 | 2.9800 | 1.09712 | .15516 | 2.6682 | 3.2918 | 1.00 | 5.00 |
| control | 31 | 2.2903 | .82436 | .14806 | 1.9879 | 2.5927 | 1.00 | 5.00 |
| Total | 132 | 2.4167 | 1.03409 | .09001 | 2.2386 | 2.5947 | 1.00 | 5.00 |

Test of Homogeneity of Variances

| Decision | | | | |
|------------------|-----|-----|------|--|
| Levene Statistic | df1 | df2 | Sig. | |
| 2.121 | 2 | 129 | .124 | |

Tests of Between-Subjects Effects

Dependent Variable: Decision

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|-----------------|----------------------------|-----|-------------|---------|------|
| Corrected Model | 27.893 ^a | 2 | 13.946 | 16.036 | .000 |
| Intercept | 723.649 | 1 | 723.649 | 832.073 | .000 |
| PreProControl | 27.893 | 2 | 13.946 | 16.036 | .000 |
| Error | 112.191 | 129 | .870 | | |
| Total | 911.000 | 132 | | | |
| Corrected Total | 140.083 | 131 | | | |

a. R Squared = .199 (Adjusted R Squared = .187)

- The Two-way ANOVA on Impulsive buying decisions in (Prescriptive, Proscriptive) × (Descriptive, Injunctive) groups and control group

Between-Subjects Factors

| | Value Label | N |
|-------------|-------------|--------------|
| PreProCon | 1.00 | Prescriptive |
| | 2.00 | Proscriptive |
| | 3.00 | Control |
| DesInjunCon | 1.00 | Prescriptive |
| | 2.00 | Proscriptive |
| | 3.00 | Control |

Levene's Test of Equality of Error Variances^a

Dependent Variable: Decision

| F | df1 | df2 | Sig. |
|-------|-----|-----|------|
| 2.053 | 4 | 127 | .091 |

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + PreProCon + DesInjunCon + PreProCon * DesInjunCon

Descriptive Statistics

Dependent Variable: Decision

| ProPreControl | DesInjunControl | Mean | Std. Deviation | N |
|---------------|-----------------|--------|----------------|-----|
| pro | Des | 2.0769 | .79614 | 26 |
| | Injunc | 1.8000 | .81650 | 25 |
| | Total | 1.9412 | .81023 | 51 |
| pre | Des | 2.7083 | 1.04170 | 24 |
| | Injunc | 3.2308 | 1.10662 | 26 |
| | Total | 2.9800 | 1.09712 | 50 |
| control | control | 2.2903 | .82436 | 31 |
| | Total | 2.2903 | .82436 | 31 |
| Total | Des | 2.3800 | .96658 | 50 |
| | Injunc | 2.5294 | 1.20587 | 51 |
| | control | 2.2903 | .82436 | 31 |
| | Total | 2.4167 | 1.03409 | 132 |

Tests of Between-Subjects Effects

Dependent Variable: Decision

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|-------------------------|-------------------------|-----|-------------|---------|------|
| Corrected Model | 32.276 ^a | 4 | 8.069 | 9.506 | .000 |
| Intercept | 748.865 | 1 | 748.865 | 882.187 | .000 |
| PreProCon | 26.815 | 1 | 26.815 | 31.589 | .000 |
| DesInjunCon | .380 | 1 | .380 | .448 | .505 |
| PreProCon * DesInjunCon | 4.029 | 1 | 4.029 | 4.746 | .031 |
| Error | 107.807 | 127 | .849 | | |
| Total | 911.000 | 132 | | | |
| Corrected Total | 140.083 | 131 | | | |

a. R Squared = .230 (Adjusted R Squared = .206)

Figure. The Two-way ANOVA on Impulsive Purchasing in (Prescriptive, Proscriptive) * (Descriptive, Injunctive) groups and control groups

(Note: Pre = Prescriptive Group's Buying Decision; Pro = Proscriptive Group's Buying Decision; Des = Descriptive Group's Buying Decision; Injun = Injunctive Group's Buying Decision; Control = Control Group's Buying Decision)

Appendix 5.21 Study three: the ANOVA and Tukey on impulsiveness trait dependent on locations

ANOVA:

Descriptives

Urge

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|--------|-----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| ML | 39 | 3.8333 | 1.22653 | .19640 | 3.4357 | 4.2309 | 1.00 | 6.50 |
| Guild | 32 | 3.6563 | 1.23581 | .21846 | 3.2107 | 4.1018 | 1.75 | 6.50 |
| Gym | 12 | 3.6042 | 1.32912 | .38369 | 2.7597 | 4.4487 | 1.25 | 5.50 |
| BBS | 16 | 3.9375 | 1.10114 | .27528 | 3.3507 | 4.5243 | 1.50 | 5.75 |
| Others | 17 | 3.3088 | 1.15085 | .27912 | 2.7171 | 3.9005 | 1.50 | 6.00 |
| Total | 116 | 3.6983 | 1.20755 | .11212 | 3.4762 | 3.9204 | 1.00 | 6.50 |

Test of Homogeneity of Variances

Urge

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| .337 | 4 | 111 | .852 |

Urge

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|------|------|
| Between Groups | 4.368 | 4 | 1.092 | .742 | .565 |
| Within Groups | 163.321 | 111 | 1.471 | | |
| Total | 167.690 | 115 | | | |

Tukey:

Multiple Comparisons

Dependent Variable: Urge

Tukey HSD

| (I) Locations | (J) Locations | Mean Difference | Std. Error | Sig. | 95% Confidence Interval | |
|---------------|---------------|-----------------|------------|-------|-------------------------|-------------|
| | | (I-J) | | | Lower Bound | Upper Bound |
| ML | Guild | .17708 | .28932 | .973 | -.6252 | .9794 |
| | Gym | .22917 | .40043 | .979 | -.8813 | 1.3396 |
| | BBS | -.10417 | .36012 | .998 | -1.1028 | .8945 |
| | Others | .52451 | .35253 | .573 | -.4531 | 1.5021 |
| Guild | ML | -.17708 | .28932 | .973 | -.9794 | .6252 |
| | Gym | .05208 | .41060 | 1.000 | -1.0866 | 1.1907 |
| | BBS | -.28125 | .37140 | .942 | -1.3112 | .7487 |
| | Others | .34743 | .36405 | .875 | -.6621 | 1.3570 |
| Gym | ML | -.22917 | .40043 | .979 | -1.3396 | .8813 |
| | Guild | -.05208 | .41060 | 1.000 | -1.1907 | 1.0866 |
| | BBS | -.33333 | .46322 | .952 | -1.6179 | .9512 |
| | Others | .29534 | .45735 | .967 | -.9729 | 1.5636 |
| BBS | ML | .10417 | .36012 | .998 | -.8945 | 1.1028 |
| | Guild | .28125 | .37140 | .942 | -.7487 | 1.3112 |
| | Gym | .33333 | .46322 | .952 | -.9512 | 1.6179 |
| | Others | .62868 | .42251 | .572 | -.5430 | 1.8003 |
| Others | ML | -.52451 | .35253 | .573 | -1.5021 | .4531 |
| | Guild | -.34743 | .36405 | .875 | -1.3570 | .6621 |
| | Gym | -.29534 | .45735 | .967 | -1.5636 | .9729 |
| | BBS | -.62868 | .42251 | .572 | -1.8003 | .5430 |

Urge

Tukey HSD^{a,b}

| Locations | N | Subset for alpha = 0.05 |
|-----------|----|-------------------------|
| | | 1 |
| Others | 17 | 3.3088 |
| Gym | 12 | 3.6042 |
| Guild | 32 | 3.6563 |
| ML | 39 | 3.8333 |
| BBS | 16 | 3.9375 |
| Sig. | | .499 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 19.117.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Appendix 5.22 Study three: the ANOVA and Tukey on buying decisions dependent on locations

ANOVA:

Descriptives

Decisions

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|--------|-----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| ML | 39 | 2.4103 | .88013 | .14093 | 2.1250 | 2.6956 | 1.00 | 5.00 |
| Guild | 32 | 2.3750 | .83280 | .14722 | 2.0747 | 2.6753 | 1.00 | 4.00 |
| Gym | 12 | 2.5000 | .90453 | .26112 | 1.9253 | 3.0747 | 1.00 | 4.00 |
| BBS | 16 | 2.3125 | .47871 | .11968 | 2.0574 | 2.5676 | 2.00 | 3.00 |
| Others | 17 | 2.0588 | .82694 | .20056 | 1.6337 | 2.4840 | 1.00 | 3.00 |
| Total | 116 | 2.3448 | .81404 | .07558 | 2.1951 | 2.4945 | 1.00 | 5.00 |

Test of Homogeneity of Variances

Decisions

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| 1.314 | 4 | 111 | .269 |

Decisions

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|------|------|
| Between Groups | 1.892 | 4 | .473 | .707 | .589 |
| Within Groups | 74.315 | 111 | .670 | | |
| Total | 76.207 | 115 | | | |

Tukey:

Multiple Comparisons

Dependent Variable: Decisions

Tukey HSD

| (I) Locations | (J) Locations | Mean Difference | | Sig. | 95% Confidence Interval | |
|---------------|---------------|-----------------|------------|-------|-------------------------|-------------|
| | | (I-J) | Std. Error | | Lower Bound | Upper Bound |
| ML | Guild | .03526 | .19516 | 1.000 | -.5060 | .5765 |
| | Gym | -.08974 | .27011 | .997 | -.8388 | .6593 |
| | BBS | .09776 | .24292 | .994 | -.5759 | .7714 |
| | Others | .35143 | .23780 | .579 | -.3080 | 1.0109 |
| Guild | ML | -.03526 | .19516 | 1.000 | -.5765 | .5060 |
| | Gym | -.12500 | .27697 | .991 | -.8931 | .6431 |
| | BBS | .06250 | .25053 | .999 | -.6323 | .7573 |
| | Others | .31618 | .24557 | .699 | -.3648 | .9972 |
| Gym | ML | .08974 | .27011 | .997 | -.6593 | .8388 |
| | Guild | .12500 | .27697 | .991 | -.6431 | .8931 |
| | BBS | .18750 | .31247 | .975 | -.6790 | 1.0540 |
| | Others | .44118 | .30850 | .610 | -.4143 | 1.2967 |
| BBS | ML | -.09776 | .24292 | .994 | -.7714 | .5759 |
| | Guild | -.06250 | .25053 | .999 | -.7573 | .6323 |
| | Gym | -.18750 | .31247 | .975 | -1.0540 | .6790 |
| | Others | .25368 | .28500 | .900 | -.5367 | 1.0440 |
| Others | ML | -.35143 | .23780 | .579 | -1.0109 | .3080 |
| | Guild | -.31618 | .24557 | .699 | -.9972 | .3648 |
| | Gym | -.44118 | .30850 | .610 | -1.2967 | .4143 |
| | BBS | -.25368 | .28500 | .900 | -1.0440 | .5367 |

Decisions

Tukey HSD^{a,b}

| Locations | N | Subset for alpha = 0.05 |
|-----------|----|----------------------------|
| | | 1 |
| Others | 17 | 2.0588 |
| BBS | 16 | 2.3125 |
| Guild | 32 | 2.3750 |
| ML | 39 | 2.4103 |
| Gym | 12 | 2.5000 |
| Sig. | | .459 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 19.117.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Appendix 5.23 Study three: the ANOVA and T-test on impulsive urge dependent on weeks

ANOVA:

| | | Descriptives | | | | | | | |
|------|-------|--------------|--------|-------------------|---------------|-------------------------------------|-------------|---------|---------|
| | | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
| | | | | | | Lower Bound | Upper Bound | | |
| Urge | 1.00 | 65 | 3.7615 | 1.11666 | .13850 | 3.4848 | 4.0382 | 1.00 | 6.50 |
| | 2.00 | 51 | 3.6176 | 1.32132 | .18502 | 3.2460 | 3.9893 | 1.25 | 6.50 |
| | Total | 116 | 3.6983 | 1.20755 | .11212 | 3.4762 | 3.9204 | 1.00 | 6.50 |

Test of Homogeneity of Variances

Urge

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| 1.666 | 1 | 114 | .199 |

Urge

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|------|------|
| Between Groups | .592 | 1 | .592 | .404 | .526 |
| Within Groups | 167.098 | 114 | 1.466 | | |
| Total | 167.690 | 115 | | | |

T-Test:

Group Statistics

| | Week | N | Mean | Std. Deviation | Std. Error Mean |
|------|-------------|----|--------|----------------|-----------------|
| Urge | First week | 65 | 3.7615 | 1.11666 | .13850 |
| | Second week | 51 | 3.6176 | 1.32132 | .18502 |

Independent Samples Test

| | | Levene's Test for Equality of Variances | | | | | | | t-test for Equality of Means | | 95% Confidence Interval of the Difference | |
|------|-----------------------------|---|------|------|--------|-----------------|-----------------|-----------------------|------------------------------|--|---|--------|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | | | Lower | Upper |
| Urge | Equal variances assumed | 1.666 | .199 | .635 | 114 | .526 | .14389 | .22648 | | | -.30475 | .59254 |
| | Equal variances not assumed | | | .623 | 97.757 | .535 | .14389 | .23112 | | | -.31477 | .60256 |

Appendix 5.24 Study three: the ANOVA and T-test on impulsive decisions dependent on weeks

ANOVA:

| Descriptives | | | | | | | | | |
|--------------|-------|-----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
| | | | | | | Lower Bound | Upper Bound | | |
| Decisions | 1.00 | 65 | 2.4154 | .84580 | .10491 | 2.2058 | 2.6250 | 1.00 | 5.00 |
| | 2.00 | 51 | 2.2549 | .77054 | .10790 | 2.0382 | 2.4716 | 1.00 | 4.00 |
| | Total | 116 | 2.3448 | .81404 | .07558 | 2.1951 | 2.4945 | 1.00 | 5.00 |

Test of Homogeneity of Variances

Decision

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| .179 | 1 | 114 | .673 |

Decision

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|-------|------|
| Between Groups | .736 | 1 | .736 | 1.112 | .294 |
| Within Groups | 75.471 | 114 | .662 | | |
| Total | 76.207 | 115 | | | |

T-Test:

Group Statistics

| | Week | N | Mean | Std. Deviation | Std. Error Mean |
|----------|------|----|--------|----------------|-----------------|
| Decision | 1.00 | 65 | 2.4154 | .84580 | .10491 |
| | 2.00 | 51 | 2.2549 | .77054 | .10790 |

Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | 95% Confidence Interval of the Difference | |
|----------|-----------------------------------|---|------|------------------------------|-------------|---------------------|--------------------|--------------------------|---|--------|
| | | F | Sig. | t | df | Sig. (2- tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Decision | Equal variances assumed | .179 | .673 | 1.054 | 114 | .294 | .16048 | .15220 | -.14103 | .46200 |
| | Equal variances not assumed | | | 1.066 | 111.4 25 | .289 | .16048 | .15049 | -.13771 | .45868 |

Appendix 5.25 Study three: the ANOVA and T-test on impulsive urge dependent on gender

ANOVA:

| | | Descriptives | | | | | | | |
|------|--------|--------------|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
| | | | | | | Lower Bound | Upper Bound | | |
| Urge | Male | 59 | 3.8093 | 1.12221 | .14610 | 3.5169 | 4.1018 | 1.25 | 6.50 |
| | Female | 57 | 3.5833 | 1.28984 | .17084 | 3.2411 | 3.9256 | 1.00 | 6.50 |
| | Total | 116 | 3.6983 | 1.20755 | .11212 | 3.4762 | 3.9204 | 1.00 | 6.50 |

Test of Homogeneity of Variances

Urge

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| 2.152 | 1 | 114 | .145 |

Urge

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|-------|------|
| Between Groups | 1.481 | 1 | 1.481 | 1.016 | .316 |
| Within Groups | 166.209 | 114 | 1.458 | | |
| Total | 167.690 | 115 | | | |

T-Test:

Group Statistics

| | Gender | N | Mean | Std. Deviation | Std. Error Mean |
|------|--------|----|--------|----------------|-----------------|
| Urge | Male | 59 | 3.8093 | 1.12221 | .14610 |
| | Female | 57 | 3.5833 | 1.28984 | .17084 |

Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | 95% Confidence Interval of the Difference | |
|------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|--------|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Urge | Equal variances assumed | 2.152 | .145 | 1.008 | 114 | .316 | .22599 | .22425 | -.21826 | .67023 |
| | Equal variances not assumed | | | 1.005 | 110.696 | .317 | .22599 | .22479 | -.21947 | .67145 |

Appendix 5.26 Study three: the ANOVA and T-test on impulsive buying decisions dependent on gender

ANOVA:

Descriptives

| Decision | | | | | | | | |
|----------|-----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
| | | | | | Lower Bound | Upper Bound | | |
| Male | 59 | 2.5763 | 1.07002 | .13930 | 2.2974 | 2.8551 | 1.00 | 5.00 |
| Female | 57 | 2.3860 | 1.16119 | .15380 | 2.0779 | 2.6941 | 1.00 | 5.00 |
| Total | 116 | 2.4828 | 1.11498 | .10352 | 2.2777 | 2.6878 | 1.00 | 5.00 |

Test of Homogeneity of Variances

| Decision | | | |
|------------------|-----|-----|------|
| Levene Statistic | df1 | df2 | Sig. |
| .429 | 1 | 114 | .514 |

| Decision | | | | | |
|----------------|----------------|-----|-------------|------|------|
| | Sum of Squares | df | Mean Square | F | Sig. |
| Between Groups | 1.050 | 1 | 1.050 | .843 | .360 |
| Within Groups | 141.916 | 114 | 1.245 | | |
| Total | 142.966 | 115 | | | |

T-Test:

Group Statistics

| | Gender | N | Mean | Std. Deviation | Std. Error Mean |
|----------|--------|----|--------|----------------|-----------------|
| Decision | Male | 59 | 2.5763 | 1.07002 | .13930 |
| | Female | 57 | 2.3860 | 1.16119 | .15380 |

Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | 95% Confidence Interval of the Difference | |
|----------|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|--------|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Decision | Equal variances assumed | .429 | .514 | .918 | 114 | .360 | .19031 | .20722 | -.22019 | .60080 |
| | Equal variances not assumed | | | .917 | 112.480 | .361 | .19031 | .20751 | -.22083 | .60145 |

Appendix 5.27 Study three: the interactive effect of different social norms on impulsive urge

- The effect of prescriptive norms and proscriptive norms on immediate impulsive urge

Descriptives

Urge

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|-------|-----|--------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| Pro | 58 | 2.8750 | .92273 | .12116 | 2.6324 | 3.1176 | 1.00 | 5.00 |
| Pre | 58 | 4.5216 | .84330 | .11073 | 4.2998 | 4.7433 | 2.75 | 6.50 |
| Total | 116 | 3.6983 | 1.20755 | .11212 | 3.4762 | 3.9204 | 1.00 | 6.50 |

Tests of Between-Subjects Effects

Dependent Variable: Urge

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|-----------------|-------------------------|-----|-------------|----------|------|
| Corrected Model | 78.623 ^a | 1 | 78.623 | 100.632 | .000 |
| Intercept | 1586.560 | 1 | 1586.560 | 2030.699 | .000 |
| PrePro | 78.623 | 1 | 78.623 | 100.632 | .000 |
| Error | 89.067 | 114 | .781 | | |
| Total | 1754.250 | 116 | | | |
| Corrected Total | 167.690 | 115 | | | |

a. R Squared = .469 (Adjusted R Squared = .464)

b. Levene's Test of Equality of Error Variances sig. > 0.05

- The effect of prescriptive and proscriptive norms * descriptive and injunctive norms on impulsive urge

Descriptive Statistics

Dependent Variable: Urge

| PrePro | DescInjunc | Mean | Std. Deviation | N |
|--------|-------------|--------|----------------|-----|
| Pro | Descriptive | 3.3534 | .84652 | 29 |
| | Injunctive | 2.3966 | .73654 | 29 |
| | Total | 2.8750 | .92273 | 58 |
| Pre | Descriptive | 4.1121 | .66341 | 29 |
| | Injunctive | 4.9310 | .81256 | 29 |
| | Total | 4.5216 | .84330 | 58 |
| Total | Descriptive | 3.7328 | .84535 | 58 |
| | Injunctive | 3.6638 | 1.49161 | 58 |
| | Total | 3.6983 | 1.20755 | 116 |

Tests of Between-Subjects Effects

Dependent Variable: Urge

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|---------------------|-------------------------|-----|-------------|----------|------|
| Corrected Model | 101.625 ^a | 3 | 33.875 | 57.429 | .000 |
| Intercept | 1586.560 | 1 | 1586.560 | 2689.710 | .000 |
| PrePro | 78.623 | 1 | 78.623 | 133.290 | .000 |
| DescInjunc | .138 | 1 | .138 | .234 | .630 |
| PrePro * DescInjunc | 22.864 | 1 | 22.864 | 38.762 | .000 |
| Error | 66.065 | 112 | .590 | | |
| Total | 1754.250 | 116 | | | |
| Corrected Total | 167.690 | 115 | | | |

a. R Squared = .606 (Adjusted R Squared = .595)

b. Levene's Test of Equality of Error Variances sig. > 0.05

- The effect of prescriptive and proscriptive norms * self-construal on impulsive urge

Descriptive Statistics

Dependent Variable: Urge

| PrePro | IndDep | Mean | Std. Deviation | N |
|--------|-------------|--------|----------------|-----|
| Pro | Independent | 3.0431 | .95213 | 29 |
| | Dependent | 2.7069 | .87645 | 29 |
| | Total | 2.8750 | .92273 | 58 |
| Pre | Independent | 4.2667 | .58329 | 30 |
| | Dependent | 4.7946 | .99316 | 28 |
| | Total | 4.5216 | .84330 | 58 |
| Total | Independent | 3.6653 | .99418 | 59 |
| | Dependent | 3.7325 | 1.40301 | 57 |
| | Total | 3.6983 | 1.20755 | 116 |

Tests of Between-Subjects Effects

Dependent Variable: Urge

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|-----------------|-------------------------|-----|-------------|----------|------|
| Corrected Model | 84.299 ^a | 3 | 28.100 | 37.740 | .000 |
| Intercept | 1589.522 | 1 | 1589.522 | 2134.850 | .000 |
| PrePro | 79.447 | 1 | 79.447 | 106.704 | .000 |
| IndDep | .266 | 1 | .266 | .358 | .551 |
| PrePro * IndDep | 5.411 | 1 | 5.411 | 7.268 | .008 |
| Error | 83.391 | 112 | .745 | | |
| Total | 1754.250 | 116 | | | |
| Corrected Total | 167.690 | 115 | | | |

a. R Squared = .503 (Adjusted R Squared = .489)

b. Levene's Test of Equality of Error Variances sig. > 0.05

- The effect of prescriptive and proscriptive norms; descriptive and injunctive norms; self-construal on immediate impulsive urge

Descriptive Statistics

Dependent Variable: Urge

| PrePro | DescInjunc | IndDep | Mean | Std. Deviation | N |
|--------|-------------|-------------|--------|----------------|-----|
| Pro | Descriptive | Independent | 3.3000 | 1.08233 | 15 |
| | | Dependent | 3.4107 | .52447 | 14 |
| | | Total | 3.3534 | .84652 | 29 |
| | Injunctive | Independent | 2.7679 | .73028 | 14 |
| | | Dependent | 2.0500 | .56852 | 15 |
| | | Total | 2.3966 | .73654 | 29 |
| | Total | Independent | 3.0431 | .95213 | 29 |
| | | Dependent | 2.7069 | .87645 | 29 |
| | | Total | 2.8750 | .92273 | 58 |
| Pre | Descriptive | Independent | 4.0167 | .57061 | 15 |
| | | Dependent | 4.2143 | .75865 | 14 |
| | | Total | 4.1121 | .66341 | 29 |
| | Injunctive | Independent | 4.5167 | .49522 | 15 |
| | | Dependent | 5.3750 | .86464 | 14 |
| | | Total | 4.9310 | .81256 | 29 |
| | Total | Independent | 4.2667 | .58329 | 30 |
| | | Dependent | 4.7946 | .99316 | 28 |
| | | Total | 4.5216 | .84330 | 58 |
| Total | Descriptive | Independent | 3.6583 | .92495 | 30 |
| | | Dependent | 3.8125 | .75958 | 28 |
| | | Total | 3.7328 | .84535 | 58 |
| | Injunctive | Independent | 3.6724 | 1.07758 | 29 |
| | | Dependent | 3.6552 | 1.83519 | 29 |
| | | Total | 3.6638 | 1.49161 | 58 |
| | Total | Independent | 3.6653 | .99418 | 59 |
| | | Dependent | 3.7325 | 1.40301 | 57 |
| | | Total | 3.6983 | 1.20755 | 116 |

Tests of Between-Subjects Effects

Dependent Variable: Urge

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|------------------------------|-------------------------|-----|-------------|----------|------|
| Corrected Model | 111.063 ^a | 7 | 15.866 | 30.261 | .000 |
| Intercept | 1591.643 | 1 | 1591.643 | 3035.636 | .000 |
| PrePro | 78.716 | 1 | 78.716 | 150.131 | .000 |
| IndDep | .365 | 1 | .365 | .695 | .406 |
| DescInjunc | .098 | 1 | .098 | .186 | .667 |
| PrePro * IndDep | 5.007 | 1 | 5.007 | 9.550 | .003 |
| PrePro * DescInjunc | 22.861 | 1 | 22.861 | 43.601 | .000 |
| IndDep * DescInjunc | .051 | 1 | .051 | .097 | .756 |
| PrePro * IndDep * DescInjunc | 4.015 | 1 | 4.015 | 7.658 | .007 |
| Error | 56.626 | 108 | .524 | | |
| Total | 1754.250 | 116 | | | |
| Corrected Total | 167.690 | 115 | | | |

a. R Squared = .662 (Adjusted R Squared = .640)

b. Levene's Test of Equality of Error Variances sig. > 0.05

(Note: Pre = Prescriptive Group's Immediate Urge; Pro = Proscriptive Group's Immediate Urge; Des = Descriptive Group's Immediate Urge; Injun = Injunctive Group's Immediate Urge; Ind = Independent Group's Immediate Urge; Dep = Dependent Group's Immediate Urge)

Appendix 5.28 Study three: the interactive effect of different social norms on impulse buying decisions

- The effect of prescriptive norms and proscriptive norms on impulsive buying decisions

Descriptive Statistics

Dependent Variable: Decisions

| PrePro | Mean | Std. Deviation | N |
|--------|--------|----------------|-----|
| Pro | 2.0000 | .74927 | 58 |
| Pre | 2.6897 | .73046 | 58 |
| Total | 2.3448 | .81404 | 116 |

Tests of Between-Subjects Effects

Dependent Variable: Decision

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|-----------------|-------------------------|-----|-------------|----------|------|
| Corrected Model | 13.793 ^a | 1 | 13.793 | 25.193 | .000 |
| Intercept | 637.793 | 1 | 637.793 | 1164.941 | .000 |
| PrePro | 13.793 | 1 | 13.793 | 25.193 | .000 |
| Error | 62.414 | 114 | .547 | | |
| Total | 714.000 | 116 | | | |
| Corrected Total | 76.207 | 115 | | | |

a. R Squared = .181 (Adjusted R Squared = .174)

b. Levene's Test of Equality of Error Variances sig. > 0.05

- The effect of prescriptive and proscriptive norms * descriptive and injunctive norms on impulsive urge

Descriptive Statistics

Dependent Variable: Decisions

| PrePro | DescInjunc | Mean | Std. Deviation | N |
|--------|-------------|--------|----------------|-----|
| Pro | Descriptive | 2.2414 | .73946 | 29 |
| | Injunctive | 1.7586 | .68947 | 29 |
| | Total | 2.0000 | .74927 | 58 |
| Pre | Descriptive | 2.4138 | .56803 | 29 |
| | Injunctive | 2.9655 | .77840 | 29 |
| | Total | 2.6897 | .73046 | 58 |
| Total | Descriptive | 2.3276 | .65929 | 58 |
| | Injunctive | 2.3621 | .94958 | 58 |
| | Total | 2.3448 | .81404 | 116 |

Tests of Between-Subjects Effects

Dependent Variable: Decision

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|---------------------|-------------------------|-----|-------------|----------|------|
| Corrected Model | 21.586 ^a | 3 | 7.195 | 14.754 | .000 |
| Intercept | 637.793 | 1 | 637.793 | 1307.798 | .000 |
| PrePro | 13.793 | 1 | 13.793 | 28.283 | .000 |
| DescInjunc | .034 | 1 | .034 | .071 | .791 |
| PrePro * DescInjunc | 7.759 | 1 | 7.759 | 15.909 | .000 |
| Error | 54.621 | 112 | .488 | | |
| Total | 714.000 | 116 | | | |
| Corrected Total | 76.207 | 115 | | | |

a. R Squared = .283 (Adjusted R Squared = .264)

b. Levene's Test of Equality of Error Variances sig. > 0.05

- The effect of prescriptive and proscriptive norms * self-construal on impulsive urge

Descriptive Statistics

Dependent Variable: Decision

| PrePro | IndDep | Mean | Std. Deviation | N |
|--------|-------------|--------|----------------|-----|
| Pro | Independent | 2.0690 | .79871 | 29 |
| | Dependent | 1.9310 | .70361 | 29 |
| | Total | 2.0000 | .74927 | 58 |
| Pre | Independent | 2.4667 | .50742 | 30 |
| | Dependent | 2.9286 | .85758 | 28 |
| | Total | 2.6897 | .73046 | 58 |
| Total | Independent | 2.2712 | .69059 | 59 |
| | Dependent | 2.4211 | .92480 | 57 |
| | Total | 2.3448 | .81404 | 116 |

Tests of Between-Subjects Effects

Dependent Variable: Decision

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|-----------------|-------------------------|-----|-------------|----------|------|
| Corrected Model | 17.159 ^a | 3 | 5.720 | 10.849 | .000 |
| Intercept | 639.580 | 1 | 639.580 | 1213.133 | .000 |
| PrePro | 14.105 | 1 | 14.105 | 26.754 | .000 |
| IndDep | .760 | 1 | .760 | 1.442 | .232 |
| PrePro * IndDep | 2.607 | 1 | 2.607 | 4.945 | .028 |
| Error | 59.048 | 112 | .527 | | |
| Total | 714.000 | 116 | | | |
| Corrected Total | 76.207 | 115 | | | |

a. R Squared = .225 (Adjusted R Squared = .204)

b. Levene's Test of Equality of Error Variances sig. > 0.05.

- The effect of prescriptive and proscriptive norms; descriptive and injunctive norms; independent and dependent self-construal on impulsive buying decisions

Descriptive Statistics

Dependent Variable: Decision

| PrePro | DescInjunc | IndDep | Mean | Std. Deviation | N |
|--------|-------------|-------------|--------|----------------|-----|
| Pro | Descriptive | Independent | 2.2667 | .79881 | 15 |
| | | Dependent | 2.2143 | .69929 | 14 |
| | | Total | 2.2414 | .73946 | 29 |
| | Injunctive | Independent | 1.8571 | .77033 | 14 |
| | | Dependent | 1.6667 | .61721 | 15 |
| | | Total | 1.7586 | .68947 | 29 |
| | Total | Independent | 2.0690 | .79871 | 29 |
| | | Dependent | 1.9310 | .70361 | 29 |
| | | Total | 2.0000 | .74927 | 58 |
| Pre | Descriptive | Independent | 2.4000 | .50709 | 15 |
| | | Dependent | 2.4286 | .64621 | 14 |
| | | Total | 2.4138 | .56803 | 29 |
| | Injunctive | Independent | 2.5333 | .51640 | 15 |
| | | Dependent | 3.4286 | .75593 | 14 |
| | | Total | 2.9655 | .77840 | 29 |
| | Total | Independent | 2.4667 | .50742 | 30 |
| | | Dependent | 2.9286 | .85758 | 28 |
| | | Total | 2.6897 | .73046 | 58 |
| Total | Descriptive | Independent | 2.3333 | .66089 | 30 |
| | | Dependent | 2.3214 | .66964 | 28 |
| | | Total | 2.3276 | .65929 | 58 |
| | Injunctive | Independent | 2.2069 | .72601 | 29 |
| | | Dependent | 2.5172 | 1.12188 | 29 |
| | | Total | 2.3621 | .94958 | 58 |
| | Total | Independent | 2.2712 | .69059 | 59 |
| | | Dependent | 2.4211 | .92480 | 57 |
| | | Total | 2.3448 | .81404 | 116 |

Tests of Between-Subjects Effects

Dependent Variable: Decision

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
|------------------------------|-------------------------|-----|-------------|----------|------|
| Corrected Model | 27.678 ^a | 7 | 3.954 | 8.800 | .000 |
| Intercept | 639.524 | 1 | 639.524 | 1423.257 | .000 |
| PrePro | 14.049 | 1 | 14.049 | 31.265 | .000 |
| IndDep | .839 | 1 | .839 | 1.868 | .175 |
| DescInjunc | .056 | 1 | .056 | .125 | .724 |
| PrePro * IndDep | 2.464 | 1 | 2.464 | 5.484 | .021 |
| PrePro * DescInjunc | 7.911 | 1 | 7.911 | 17.607 | .000 |
| IndDep * DescInjunc | .961 | 1 | .961 | 2.139 | .147 |
| PrePro * IndDep * DescInjunc | 1.828 | 1 | 1.828 | 4.067 | .046 |
| Error | 48.529 | 108 | .449 | | |
| Total | 714.000 | 116 | | | |
| Corrected Total | 76.207 | 115 | | | |

a. R Squared = .363 (Adjusted R Squared = .322)

b. Levene's Test of Equality of Error Variances sig. > 0.05

(Note: Pre = Prescriptive Group's Buying Decision; Pro = Proscriptive Group's Buying Decision; Des = Descriptive Group's Buying Decision; Injun = Injunctive Group's Buying Decision; Control = Control Group's Buying Decision; Ind = Independent Group's Buying decisions; Dep = Dependent Group's Buying Decisions)

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